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INDIAN MINES ACT, 1923

ANNUAL REPORT

OF THE

CHIEF INSPECTOR OF MINES IN INDIA

FOR THE YEAR ENDING

31st DECEMBER 1937

00134449

DELHI: MANAGER OF PUBLICATIONS
1938

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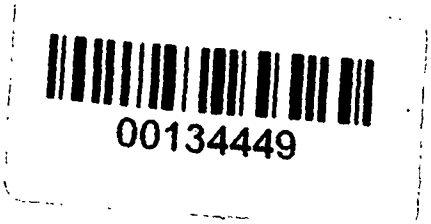

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FROM

W. KIRBY, ESQ., B.Sc., M. I. Min. E.,
CHIEF INSPECTOR OF MINES IN INDIA.

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA.
DEPARTMENT OF LABOUR,
SIMLA.

Dated Dhanbad, the 30th May 1938.

SIR,

I have the honour to submit the report upon the inspection of mines in British India for the year ending 31st December 1937.

INTRODUCTION.

The separation of Burma from India took effect from 1st April 1937, and no statistics for Burma have been included in this report.

The Indian Mines Act, 1923, applies to British India only and not to the Indian States. For the complete figures of production of all minerals raised from excavations of all depths in British India and the Indian States reference may be made to the statements of the "Mineral Production of India" published annually in the records of the Geological Survey of India, and to the "Quinquennial Review of the Mineral production of India" published every five years by the same Department. Detailed information of the mineral industries in Mysore—where the Kolar gold field is situated—and Hyderabad (Nizam's Dominions) is given in the annual reports of the Chief Inspector of Mines in those States.

SECTION I.—PERSONS EMPLOYED.

During the year 1937 the daily average number of persons working in and about the mines regulated by the Indian Mines Act was 267,858, as compared with 269,593 in the previous year. The decrease was 1,735 persons or 0·64

per cent. Of these persons 122,807 worked underground, 72,747 in open workings and 72,304 on the surface. The numbers of men and women, respectively, who worked underground, in open workings and on the surface were as follows:—

	Men,		Women.	
	1937.	1936.	1937.	1936.
Underground . . .	118,920	123,423	3,887	7,301
In open workings . .	48,268	52,122	24,479	17,071
Surface	52,387	51,413	19,917	18,263
Total .	219,575	226,958	48,283	42,635

The number of women employed underground was 3,887, or 3·17 per cent. of the total number of men and women employed underground. The percentage of women employed underground in coal mines was 3·79, as compared with 6·87 per cent. in 1936, 8·99 per cent. in 1935, 10·94 per cent. in 1934 and 13·14 per cent. in 1933. The provincial distribution of the women who worked underground was as follows:—

Province.	Number of women employed underground.		
	In coal mines.	In salt mines.	Total.
Bengal	1,352	..	1,352
Bihar	2,185	..	2,185
Central Provinces	335	..	335
Orissa	..	..	..
Punjab	..	15	15
Total .	3,872	15	3,887 in 1937, as compared with 7,301 in 1936.

The daily average number of persons employed in coal mines was 171,149, which is 8,232 more than the number employed in 1936. Of these persons 46,192 were males employed in cutting coal, 24,356 were males employed as loaders of coal and 22,887 were women.

The increase in the daily average number of persons employed in coal mines in 1937, as compared with 1936, is reflected in the larger quantity of coal produced.

Annual returns are now received of the number of persons actually at work and also of persons who should ordinarily have been at work but were absent on a selected day in February of each year. The returns relate only to coal mines. The day to which the returns apply must be the day of a

week selected by the Chief Inspector in which there is the largest turn-out of workers. For February 1938 the week selected by me was as follows :—

Bengal, Bihar and Orissa	13th to 19th.
Assam, Baluchistan, the Central Provinces and the Punjab .	6th to 12th.

Although these returns are for a day in 1938, they are included in this report as they would be more than a year out of date if held over till the submission of the report for the year in which they are made.

The returns for 1938 show that on the day selected 266,571 persons were either at work or were prevented from attending work. This figure is 95,422 more than the average number of persons employed in coal mines during 1937. Three of the important district comparisons are as follows :—

	Average daily attendance.	Attendance on selected day (absentees included).	Excess over average daily attendance.	Percentage excess.
Jharia Coalfield . . .	74,205	115,422	41,217	55·54
Raniganj Coalfield . .	57,843	87,689	29,846	51·60
Central Provinces Coalfield .	11,918	16,360	4,442	37·35

Some of the percentages of absentees are as follows :—All mines from which returns were received 8·2; Jharia 3·0; Raniganj 7·9 and the Central Provinces 7·7. It is probable that the reason for the low percentage of absentees in the Jharia coalfield is that a larger proportion of the labour force is resident at or near the mines than in the other areas. A detailed statement compiled from the returns is given in Appendix I, Table No. 1-A. It may be noticed that the percentage of excess of labour on the selected day in February over the average daily attendance in the Jharia coalfield has increased from 12·18 to 55·54, and in the Raniganj coalfield from 12·98 to 51·60, while in the Central Provinces it has increased from 26·88 to 37·35. The output of coal in the Jharia coalfield during that month increased by 27 per cent. and the difference in proportion to the increase of labour may be attributed to two reasons:—

(1) the removal of overburden in the process of forming extensive quarries during which period no coal was raised; and (2) to the recent re-opening of collieries. A typical example in the former case is one in which the labour figure last year was 379, while the labour employed this year at the same colliery increased to 2,501, and in the latter case at a colliery which was re-opened the labour employed this year being 1,856, while last year it was *nil*. In the Raniganj field the increase in the percentage of labour is in keeping with the increased output of coal during that month; so also in the Central Provinces coalfield. It should be pointed out that February is probably the busiest month of the year, *i. e.*, the month in which labour is most plentiful and that the figures for average daily attendance do not include absentees.

Figures showing the average output of coal per person employed are given below:—

	Tons of coal per person employed.			
	Underground and in open workings.		Above and below ground.	
	1937.	1935-36.	1937.	1935-36.
British India	189	182	131	129
Bengal and Bihar	192	186	132	131
Assam	169	150	117	105
Baluchistan	42	41	41	41
Central Provinces	175	163	126	117
Orissa	198	203	146	151
Punjab	110	113	69	74

There was a general increase in the average output of coal per person employed except in Baluchistan and Orissa. In comparing the figures with similar figures in other countries it should be remembered that both men and women are employed in Indian coal mines. In 1936 the output of coal per person employed above and below ground in the United Kingdom was 298 tons. In the same year, *i. e.*, 1936 comparative figures in certain other countries were Japan 207 tons; France 210 tons; Germany 311 tons; and the United States of America 671 tons.

The number of persons employed in metalliferous (including mica, stone, clay and salt) mines was 96,709 which is 9,967 less than the number employed in 1936. 71,313 were men and 25,396 were women. Of the women 15 worked underground in salt mines.

Bengal, Bihar and Orissa.—At the beginning of the year there was a shortage of labour on account of the good harvest season. Many colliery owners were compelled to transport the miners from their villages in buses in order to obtain the necessary labour. Wages were increased by as much as 25 per cent. at some collieries, necessitated by the elimination of female labour from the underground workings of mines on 1st October. Towards the end of the year the supply of labour was ample. The relations on the whole between employers and labour continued to be good. At one colliery there was a partial strike for increased rates which lasted for three days.

The general health of the mining population in the Jharia and Raniganj coalfields was on the whole satisfactory. The death rate per thousand persons was lower both in the Raniganj and Jharia Mining Settlements. Details of the activities of the Mines Board of Health in the Raniganj and Jharia coalfields are given in Section V of this report, from which it will be seen that the work of both the Boards is being satisfactorily maintained.

In the iron ore mines of Singhbhum district there was no shortage of labour during the year. There was a further increase in the miners' wages,

due to an increase in the rates and an increase in the output per head. Apart from a minor strike which lasted one day there was no further labour trouble.

At the copper mines worked by the Indian Copper Corporation, Limited, in the Singhbhum district, there was an ample supply of labour. A lightning strike for three days occurred in April at the smelter. Labour unrest was a conspicuous feature during the year, but it abated towards the end of the year. There was no outbreak of epidemic disease.

At the mica mines of Chota Nagpur there was an insufficient supply of labour. Most of the labour was attracted to dump work by the high rates offered. There was no epidemic or strike during the year.

Assam.—There was a sufficient supply of labour and there were no strikes or epidemics. The use of water-proofed safety helmets was continued and two hundred helmets were supplied, free of cost, to the miners during the year.

Central Provinces.—In the Pench Valley coalfield there was a shortage of labour on occasions and particularly in the months of October and November, following the elimination of females from the underground workings of mines. There was a slight increase in the rate of wages. The prices of food stuffs remained much about the same. The relations between the employers and labour were good. On the whole the general health of the labourers was good.

At the manganese mines in the Central Paovinces there was a heavy demand for ore during the middle part of the year and the opening of a large number of small mines resulted in a large demand for labour and a general tendency for wages to rise. There were no strikes or labour disputes. There was an epidemic of cholera at one mine resulting in 73 attacks and 25 deaths. There were no other outbreaks of epidemic disease.

Punjab.—There was no change in the labour conditions, the supply exceeding the demand. There was no epidemic and the health of the labourers remained satisfactory. A lady doctor and a Sanitary Inspector were employed to supervise the welfare of the labourers and improve sanitary conditions. The rainfall was again below the average but there was no shortage of water during the year.

Madras.—There was a plentiful supply of labour at the mica mines during the year. Increased wages were paid as a result of the increased demand for mica. The relations between employers and labour were good.

In the table on page 6 figures are given of the average daily wages paid in December in each important mining field in India. If the figures are compared with those in last year's Annual Report it will be seen that there was a general increase in the wages paid to underground miners in all the coalfields. There were also small increases in wages paid to other classes of labour in practically all the coalfields.

Average daily earnings in December 1937.

Mineral Field.	Underground.												Open workings.												Surface.								
	Overmen and Sirdars — Foremen and Mates.			Miners.			Loaders.			Skilled Labour.			Unskilled Labour.			Females.			Overmen and Sirdars — Foremen and Mates.			Miners.			Loaders.			Skilled Labour.			Unskilled Labour.			Females.			Clerical and Supervising Staff.			Skilled Labour.			Unskilled Labour.			Females.		
	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.	R	a.	p.
Jharia Coalfield (Bihar)	1	2	3	0	9	3	0	8	0	0	10	3	0	7	0	..			0	14	6	0	8	6	0	6	9	0	8	3	0	6	3	0	5	3	1	3	0	0	10	0	0	6	6	0	4	6
Raniganj Coalfield (Bengal).	1	0	0	0	9	0	0	7	9	0	9	6	0	7	0	..			0	11	3	0	8	9	0	6	6	0	7	3	0	7	6	0	4	9	0	15	9	0	9	0	0	6	3	0	4	0
Giridih Coalfield . .	2	4	0	0	10	3	0	9	0	0	12	6	0	7	9	..			..			..			..			0	7	0	..			0	4	0	1	13	3	0	13	3	0	7	9	0	4	3
Assam Coalfield . .	1	4	6	1	1	0	1	0	0	1	2	6	0	13	6	..			1	0	0	0	15	0	0	10	0	..			..			..			2	0	0	0	14	0	0	11	0	0	7	0
Punjab Coalfield .	1	1	6	0	15	9	0	14	0	0	12	6	0	7	3	..			0	10	6	1	0	0	..			..			0	6	0	..			0	13	9	0	11	0	0	7	6	0	3	0
Baluchistan Coalfield .	1	9	0	0	10	3	0	10	6	0	12	9	0	8	0	..			..			..			..			..			..			..			0	15	6	0	11	9	0	8	6	..		
Pench Valley Coalfield (Central Provinces).	1	2	9	0	11	9	0	7	3	0	10	6	0	7	0	..			0	15	0	0	9	3	0	5	0	0	9	0	0	5	6	0	3	3	1	1	0	0	9	3	0	6	3	0	3	9
Bihar Mica . .	0	9	6	0	7	0	..			0	7	0	0	4	9	..			0	8	0	0	5	9	..			0	5	3	0	4	3	0	2	9	0	13	9	0	7	0	0	5	3	0	4	0
Madras Mica . .	0	7	9	0	5	6	..			0	4	9	0	4	3	..			0	9	3	0	5	0	..			0	4	6	0	3	9	0	3	3	0	11	3	0	5	0	0	4	9	0	3	6
Central Provinces Manganese.	..			0	7	0	..			0	9	0	0	5	6	..			0	12	3	0	5	6	..			0	7	3	0	4	0	0	4	3	1	1	0	0	10	6	0	5	3	0	3	6
Central Provinces Limestone.	..			..			..			..			..			..			0	9	3	0	6	9	..			0	6	9	0	4	3	0	2	9	0	5	3	0	5	3	0	3	3	0	3	3
Bihar Iron . .	..			..			..			..			..			..			0	14	0	0	5	0	..			0	10	3	0	5	3	0	3	0	1	5	0	0	12	0	0	4	3	0	3	0
Punjab Salt . .	6	3	3	2	6	0	..			1	1	0	0	9	6	..			..			..			..			..			..			..			0	13	9	1	0	0	0	7	6	..		
Bihar China clay. .	0	8	9	0	5	0	..			..			0	2	3	..			0	5	0	0	3	3	..			0	5	0	0	6	3	0	10	9	1	3	3	0	6	0	0	3	6	0	2	6
Punjab Slate . .	..			..			..			..			..			..			0	8	9	0	6	6	..			0	5	0	0	4	3	..			0	13	0	0	12	3	0	6	0	..		
United Provinces Stone	..			..			..			..			..			..			0	7	6	0	7	3	..			0	5	6	0	4	0	0	3	3	0	11	3	0	3	0	0	11	0	0	2	0

Section II.—Output of Minerals.

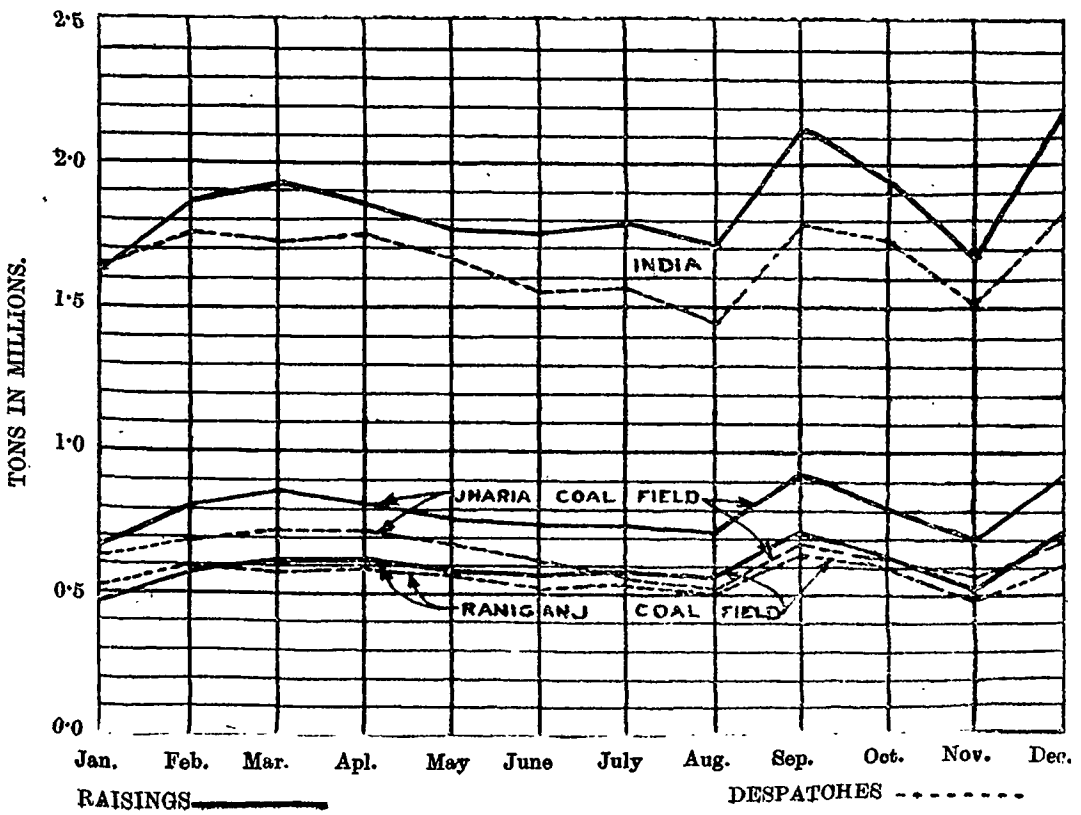
COAL.

Output.—The statement given below shows the output of coal in the various provinces in British India during the years 1936 and 1937.

	Output in tons.	
	1937	1936.
Assam	243,650	201,593
Baluchistan	10,624	3,451
Bengal	6,527,820	6,667,841
Bihar	13,835,516	12,015,205
Central Provinces	1,504,159	1,507,982
Orissa	47,127	31,061
Punjab	166,632	156,849
Total	22,335,528	20,583,982

The total output in 1937 was 22,335,528 tons of a declared value of Rs. 6,98,79,139. The increase in the output was 1,751,546 tons, *i.e.*, 8·51 per cent. and the increase in the value Rs. 1,38,94,400, *i.e.*, 24·82 per cent. The opening stocks in 1937 were 896,723 tons and the closing stocks 824,021 tons. In the charts which appear below the raisings and despatches of coal are shown month by month :—

RAISINGS AND DESPATCHES OF COAL MONTH BY MONTH IN 1937.



It will be seen from the chart that, as usual, the output was highest in the first three months of the year. The fall of output in November was greater than usual due to a plentiful harvest.

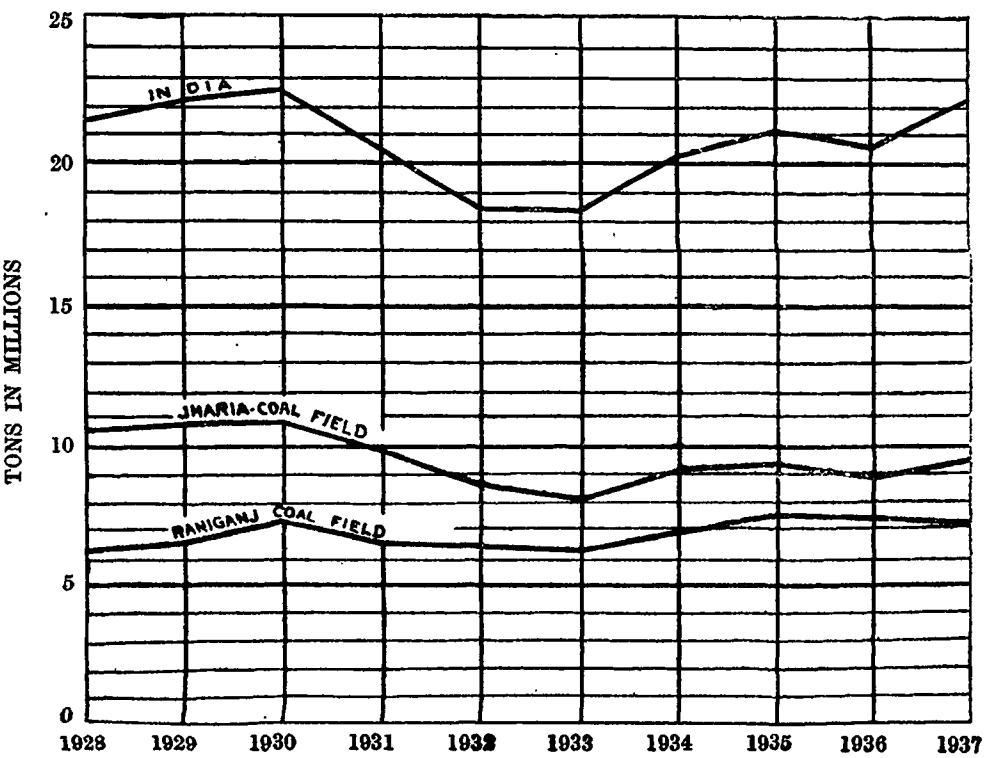
The output in Bihar increased by 1,820,311 tons; there was an increase of 16,066 tons in the Province of Orissa; and in Bengal there was a decrease of 140,021 tons. In the Central Provinces the output decreased from 1,507,982 tons to 1,504,159 tons. There were increases of 9,783 tons in the Punjab, and 7,173 tons in Baluchistan. There was an increase of 42,057 tons in Assam.

The figures of output for the principal coalfields are as follows :—

Coalfield.	1937.	1936.	Percentage increase + or decrease —
Jharia	9,601,230	8,830,144	+8·73
Raniganj	7,196,324	7,305,437	—1·49
Bokaro	2,309,170	1,417,227	+62·93
Giridih	674,794	698,133	—3·34
Karanpura . . .	534,328	396,083	+34·90
Pench Valley . . .	1,234,233	1,259,133	—1·98
Assam	243,650	201,593	+20·86

The output of the Jharia coalfield increased by about 8¾ per cent., the Raniganj coalfield decreased by about 1½ per cent., the Karanpura coalfield increased by about 35 per cent., and the output of the Assam coalfield by more than 20 per cent. There was a decrease in the Pench Valley coalfield of the Central Provinces of 2 per cent. and in the Bokaro coalfield an increase of 63 per cent. In the Giridhi coalfield the output fell by 3⅓ per cent. The accompanying chart shows the variation of the output of coal during the period 1928-1937.

CHART SHOWING OUTPUT OF COAL DURING THE PERIOD 1928-37.



Despatches.—The despatches of coal were 19,942,554 tons. and 1,192,793 tons, or 5·34 per cent. of the raisings were consumed on the collieries. The quantity of coal used for coking at the collieries was 1,272,883 tons, and 837,145 tons of soft coke and 95,439 tons of hard coke were made. There was a decrease *i. e.*, 8·79 per cent. in the quantity of soft coke manufactured at the collieries for domestic consumption. The quantity of hard coke made at the collieries is small. Most of the hard coke is made at coke-making plants which do not come under the Mines Act, and 1,928,752 tons of coal were despatched to coke-making plants of this kind in 1937. This quantity is 93,755 tons more than in 1936. Analyses of the figures relating to the output of coal and the manufacture of coke will be found in Appendix I, Table No. 3.

The despatches of coal for the year were more than those for 1936 by 1,719,420 tons. The stocks of coal at the collieries at the end of the year were less than at the beginning.

The following figures giving the average value per ton of coal put into wagons in various districts may be of interest :—Assam, Rs. 8 annas 2·3 ; Baluchistan, Rs. 6 annas 12·3 ; Bengal, Rs. 3 annas 6·3 ; Bihar (Jharia coalfield), Rs. 3 annas 8·6 ; Central Provinces, Rs. 3 annas 8 ; and the Punjab, Rs. 5 annas 2·5. There were increases in the average per ton of coal in Baluchistan, Bengal, Bihar and the Punjab of annas 13·4, annas 11·5, annas 4·2 and Re. 1 annas 3·7, respectively. In Assam and the Central Provinces there were decreases of Re. 1 annas 4·2 and annas 1·4, respectively.

Trade Conditions.—The demand for coal was good throughout the year. From April until the end of the year prices increased while the supply of coal could not meet the demand. Enquiries from overseas could not be met and the outlook, until December, was excellent, when the market was slightly weaker, but with forward commitments made at favourable prices for most classes of coal. The contract for the Ceylon Government Railway was retained by the Indian coal owners.

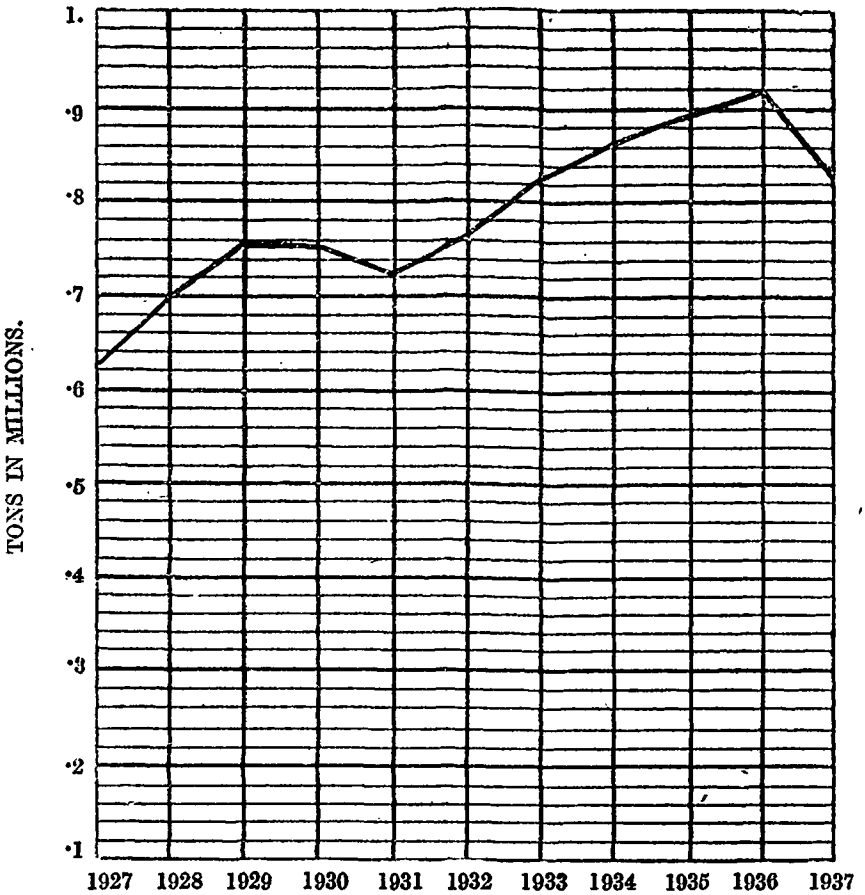
Coal Grading Board and Soft Coke Cess Committee.—The Indian Coal Grading Board, as in previous years, maintained the standard of good work during the year 1937, and the quality of coal exported was satisfactory. During the year 1,832,735 tons of coal were exported, as compared with 1,687,357 tons during the year 1936, or an increase of 145,378 tons.

The Soft Coke Cess Committee continued as on previous years to carry on propaganda work for popularising soft coke as a domestic fuel, and its use is gradually spreading. The arrangement introduced last year for inspecting the loading of soft coke wagons at the collieries was maintaind.

The question of improving the quality of soft coke is still engaging the attention of the Committee. During the year the prices of soft coke remained very high due to a shortage of coal and coke and despatches were adversely affected. Approximately 830,784 tons of soft coke were despatched from the coalfields in the year 1937, as compared with 915,719 tons during the year 1936. Out of the output for 1937, 786,126 tons were despatched from mines

in the Jharia coalfield. The accompanying graph shows the development of the soft coke industry during the last ten years.

DESPATCHES OF SOFT COKE FROM 1927 TO 1937.



Use of Electricity both at Coal Mines and at other mines.—The number of coal mines using electrical energy was 124, the same as in 1936, but the aggregate horse power employed at coal mines increased from 84,168 to 86,804, *i. e.*, by 3·1 per cent. The increase is due to the increased horse power of motors installed chiefly in the Jharia, Raniganj and Central Provinces coalfields. During the year electrical plant was installed and brought into operation in three additional mines and was withdrawn from three other mines. Of mines using electricity, three were re-opened and three were closed.

Electricity was used at 20 metalliferous mines, as against 31 mines in 1936, and the aggregate horse power employed was 7,246, as against 13,479 in the previous year, showing a decrease from last year of 46·3 per cent.

Statistics of the electrical plant in use at mines in the various provinces of British India and in certain mine fields are contained in Appendix I, Tables Nos. 7, 8 and 9.

Explosives.—During the year 2,751,418 lb. of gunpowder, 61,840 lb. of high explosives, and 220,519 lb. of "permitted" explosives were used at coal mines. These figures compare with 2,181,106 lb. of gunpowder, 45,237 lb. of high explosives and 95,078 lb of "permitted" explosives used in 1936. In addition 112,881 lb. of liquid oxygen explosives were used. These explosives were used in quarries in the Bokaro coalfield. A statement of the kind and quantity of explosives used during the year in the different kinds of mines under the Act is given in Appendix I, Table No. 12.

An appendix has been added giving a list of "permitted" explosives and a list of approved types of shot firing appartus.

Coal-Cutting Machines.—The number of coal-cutting machines in use was 140, as compared with 110 in 1936. All the machines were worked by electricity. 46 machines were at work in Jharia coalfield, 78 machines in the Raniganj coalfield, 5 in Karanpura coalfield, 1 in Giridih coalfield, 1 in Bokaro coalfield and 9 in the Central Provinces. There has been an increase of eight machines in the Jharia coalfield and of fifteen machines in the Raniganj coalfield. Coal-cutting machines were in use in 50 mines, as against 39 mines in 1936 ; the total area undercut was 6,890,160 square feet, as compared with 5,357,389 square feet undercut in 1936. There has thus been a considerable increase in the output obtained in many mines from the use of machines. The re-introduction of coal-cutting machines during the year in some of the mines from which they were withdrawn during the depression period is due partly to the increased price of coal and partly to shortage of labour in mines.

Electricity Rules.—New Rules known as Indian Electricity Rules, 1937, were brought into force during the year. The new rules contained many additions to the Indian Electricity Rules, 1922, since superseded. The existing installations are being brought into conformity with the requirements of the new rules.

Supervisors' Examinations.—During the year, the Government of Bengal brought into force Rule 48 of the Indian Electricity Rules, 1937, in the subdivision of Asansol and now requires that no electrical installation work including additions, alterations and repairs to existing installations shall be carried out in mines except under the direct supervision of a person holding a certificate of competency issued by it. The Bengal Government appointed a Licensing Board for the purpose of issuing Supervisors' Certificates of Competency to qualified persons and framed regulations for the purpose. Examinations for Supervisors' Certificates of Competency were held in Calcutta and at Dhanbad and several persons employed in mines have received certificates by examination. Also many Engineers in responsible positions in mines have been granted certificates in consideration of their experience and qualifications.

Mechanical Ventilators.—In Appendix I, Table No. 10, particulars are given of the number of mechanical ventilators in use in coal mines under the Act. In 1937, 117 mechanical ventilators were in use, the number being 104 in the previous year.

Safety Lamps.—In Appendix I, Table No. 11, particulars are given of the number of safety lamps in use in coal mines under the Act. 42,932 safety lamps were in use in 1937, as compared with 33,051 in 1936.

Iron Ore.

The production of iron ore was 1,587,362 tons, valued at Rs. 27,30,077, as compared with 1,401,530 tons, valued at Rs. 22,84,834 in 1936.

Manganese Ore.

There was an increase of 175,450 tons in the output of manganese ore, the figures of production being 800,280 tons, valued at Rs. 1,21,06,593, as compared with 624,830 tons, valued at Rs. 49,62,272 in 1936. The average reported value per ton of manganese ore produced rose from Rs. 7·94 in 1936 to Rs. 15·13 in 1937. The corresponding value in 1935 was 9·52. The Central Provinces Manganese Ore Company, Limited, despatched a total of 754,367 tons as follows :—276,024 tons to Calcutta ; 341,748 tons to Vizagapatam ; 43,831 tons to Bombay ; and 92,764 tons of other sales on f. o. r. basis. The quantity despatched by the company in 1936 was 490,050 tons so that the despatches in 1937 were greatly in excess of those in 1936. The average f. o. b. price realised in 1937 was 8·28 annas per unit. It is more than the figures of the previous year. There was a strong demand for ore of all but very low grades from March 1937 until October 1937, when demand slackened somewhat due partly to high steamer freights and partly to buyers having satisfied their requirements.

Gold.

The output of gold in 1937 was 26 ounces which was obtained from the Manbhum district of Bihar.

Chromite Ore.

The production of chromite ore was 35,387 tons, valued at Rs. 5,13,473 as compared with 28,142 tons, valued at Rs. 3,91,404.

Copper Ore.

The output of copper ore was 371,458 tons, valued at Rs. 48,69,790, as compared with 357,194 tons, valued at Rs. 40,03,200 in 1936. The whole of the production came from the mines belonging to the Indian Copper Corporation, Limited, in the Singhbhum district of Bihar. The production of refined copper amounted to 6,830 tons, as compared with 7,200 tons in 1936. The production of yellow metal sheet and circles at the rolling mills was 10,019 tons, involving the use of 6,422 tons of copper. Development of the Mosaboni and Dhobani mines is proceeding in depth.

Mica.

The quantity of mica consigned was 94,811 cwt., valued at Rs. 39,16,718, as compared with 82,077 cwt., valued at Rs. 32,33,396 in 1936. The output of dressed mica in 1937 was 103,641 cwt., as compared with 86,504 cwt., in

1936. In addition, 24,407 cwt. of waste mica fit for splittings valued at Rs. 91,737 were consigned from Nellore district, Madras Presidency, and 664 cwt., valued at Rs. 210 from Ajmer-Merwara district in Rajputana. The output of this kind of mica was 28,863 cwt.

The quantities of mica and splittings shipped in 1936 and 1937 are as follows :—

	Cwt.	Rs.
1936	99,491	72,57,054
1937	134,425	1,16,73,944

In addition, 120,191 cwt. of "pattern cut" and scrap mica having a value of Rs. 9,63,873 were shipped, as compared with 58,250 cwt. valued at Rs. 8,45,219.

Rock-salt.

The production of rock-salt was 163,813 tons, as compared with 151,523 tons in the previous year.

Limestone.

The reported production of limestone was 1,318,598 tons, valued at Rs. 13,88,468, as compared with 1,007,957 tons, valued at Rs. 11,61,005 in 1936.

Stone.

Returns were submitted by the owners of one hundred and nine stone mines, and the figures of production were as follows :—1,205,756 tons of igneous rock ; 39,414 tons of sandstone ; 39,934 tons of gravel ; and 30,565 tons of murrum. The total production was 1,315,569 tons, as compared with 1,338,160 tons in 1936.

Clays.

From the twenty-six clay mines from which figures were obtained 33,332 tons of fire-clay, 11,024 tons of china clay and 89,058 tons of ordinary clay were produced.

Other Minerals.

The production of other minerals were as follows :—15,150 tons of bauxite, valued at Rs. 61,839 ; 7,446 tons of slate, valued at Rs. 1,39,835 ; 23,782 tons of magnesite, valued at Rs. 1,40,708 ; 13,932 tons of gypsum, valued at Rs. 36,418 ; 7,591 tons of barytes, valued at Rs. 70,635 ; 2,554 tons of steatite, valued at Rs. 14,490 ; 112 tons of ochre, valued at Rs. 903 ; 268 tons of felspar, valued at Rs. 1,867 ; 166 tons of apatite, valued at Rs. 1,660 ; 181 tons of kaoline, valued at Rs. 543 ; and 805 tons of kyanite, valued at Rs. 12,075. Small quantities of asbestos, beryl, graphite, fuller's earth, muscovite and tantalite were also produced.

Section III.—Accidents.

During the year 1937 at mines regulated by the Indian Mines Act, 1923, there were 208 fatal accidents which is 6 less than in 1936, and 28 more than the average number in the preceding five years.

In addition to the fatal accidents there were 1,085 serious accidents involving injuries to 1,115 persons, as compared with 978 serious accidents involving injuries to 1,011 persons in the previous year. The so-called "serious" accidents reported are those in which an injury has been sustained which involves, or in all probability will involve, the permanent loss of or injury to the sight or hearing or the fracture of any limb or the enforced absence of the injured person from work for a period exceeding twenty days. Two hundred and forty-eight persons were killed and 1,156 persons were seriously injured. The latter figure includes 41 persons injured in fatal accidents. The number of persons killed was 229 less than in 1936. 228 persons killed were men and 20 were women. In one case 9 lives; in eight cases 3 lives and in fifteen cases 2 lives were lost.

The proportion of accidents which occurred to men and women, respectively, underground, in open workings, and on the surface were as follows:—

—	No. of fatal accidents.	No. of men killed.	No. of women killed.	Death rate per 1,000 persons employed.		No. of serious accidents.	No. of men injured.	No. of women injured.	Serious injury rate per 1,000 persons employed.	
				Men.	Women.				Men.	Women.
Underground .	169	189	10	1·59	2·57	815	825	15	6·94	3·86
Open workings.	25	29	6	0·60	0·25	66	54	17	1·12	0·69
Surface . .	14	10	4	0·19	0·20	204	186	18	3·55	0·90

There was a decrease in the death rate of men employed underground, in open workings and on the surface. With respect to women there was a decrease in the death-rate underground and an increase in open workings and on the surface. The causes of the fatal accidents have been classified as follows:—

—	No. of fatal accidents.	Percentage of total number of fatal accidents.
Misadventure	136	65·39
Fault of deceased	29	13·94
Fault of fellow workmen	9	4·33
Fault of subordinate officials	17	8·17
Fault of management	16	7·69
Faulty material	1	0·48
Total .	208	100·00

There was a decrease of 229 in the number of persons killed during 1937, as compared with 1936.

I have analysed serious accidents and find that out of the total of 1,156 persons seriously injured 87 were permanently partially disabled and 1,069 were only temporarily disabled.

In addition, it was reported that 3,914 persons received minor injuries which necessitated the enforced absence from work for a period exceeding forty-eight hours.

Fire-damp.—There were two fatal accidents by explosions or ignitions of fire-damp involving the death of 2 persons.

Falls of roof and side.—Falls of roof and sides caused 116 fatal accidents and 190 serious accidents. As compared with the figures under this head in the previous year the total number of accidents decreased from 378 to 306; the number of persons killed increased from 141 to 148; and the number of persons seriously injured decreased from 266 to 205. In one case three lives, while in another case two lives were lost in depillaring areas; also in two cases three lives and in nine cases two lives were lost in galleries by falls of roof. The accidents by falls of sides include one in which nine persons were killed in open workings.

In Shafts.—There were 10 fatal accidents and 32 serious accidents in shafts, as compared with 7 fatal accidents and 21 serious accidents in the previous year.

Suffocation by gases.—There was one fatal accident due to suffocation by gases, involving the death of two persons.

Explosives.—There were 13 fatal accidents and 31 serious accidents caused by explosives. In the previous year the figures were 11 and 24, respectively.

Haulage.—There were 32 fatal accidents and 218 serious accidents on haulage roads. The accidents due to haulage have been classified as follows :—

Classification.	Fatal.	Serious.	Total.
Haulage rope breaking	6	3	9
Coupling chains and hooks breaking	..	1	1
Drawbars breaking	1	..	1
Couplings becoming detached	2	5	7
Riding on sets (authorised)	..	2	2
Riding on sets (unauthorised)	2	2	4
Allowing tubs to run uncontrolled	7	21	28
While hand-tramming tubs	3	57	60
While guiding tubs on a curve	..	8	8
Following derailments or while re-railing tubs	6	55	61
While coupling or uncoupling tubs	..	12	12
While resting on or loitering about haulage roads or tramming levels.	2	25	27
Crushed against tubs, sides of roadways, doors, etc.	1	8	9
While spragging moving tubs	1	7	8
Unclassified	1	12	13
Total	32	218	250

There was an increase in the number of accidents due to breakdown in materials, there being 11 in 1937, as compared with 6 in 1936. Of the 11, 9 were due to the breakage of haulage ropes. The prolonged use of haulage ropes showing signs of extensive deterioration is to be deprecated.

The number of accidents due to unauthorised persons riding on sets was 4 in 1937, as compared with 9 in 1936. Although there is a marked improvement, stricter supervision by the subordinate underground staff and disciplinary action by managers are necessary.

There was a considerable increase in the number of accidents resulting from tubs being allowed to run uncontrolled, there being 28 in 1937, as compared with 5 in 1936. Attention is drawn to the necessity of supplying a sufficient number of suitable sprags on the loading lines and on the insistence for their regular use. Stop-blocks and catches provided at suitable points on tramlines having variable gradients would reduce this class of accident.

There was an increase in the number of accidents while tubs were being hand trammed, there being 60 in 1937, as compared with 45 in 1936. There was also an increase in the number of accidents following derailments or while re-railing tubs, there being 61 in 1937, as compared with 26 in 1936. Accidents by these causes are generally due to ignorance or carelessness of the persons involved. In re-railing tubs suitable poles should be used as levers to guard against the danger of tubs capsizing on the persons engaged in re-railing the tubs.

The number of accidents to persons resting or loitering about haulage roads or tramming levels has increased from 23 in 1936 to 27 in 1937. Attention of owners, agents and managers is drawn to my Circular No. 4 of 1931, in the hope that the recommendations contained therein will be more rigidly enforced.

The number of accidents due to persons being crushed against tubs, sides of roadways, doors, etc., has been reduced from 25 in 1936 to 9 in 1937. A little more care on the part of those involved would reduce this class of accident.

Underground Machinery.—One fatal and nine serious accidents were caused by underground machinery.

Sundries Underground.—Nineteen fatal accidents and 404 serious accidents were due to miscellaneous causes underground.

Surface Machinery.—One fatal accident and 14 serious accidents were caused by surface machinery.

Surface Railways and Tramways.—Eight fatal accidents and 110 serious accidents took place on surface railways and tramways.

Electricity.—There were 2 serious and 2 fatal accidents attributable to the use of electricity.

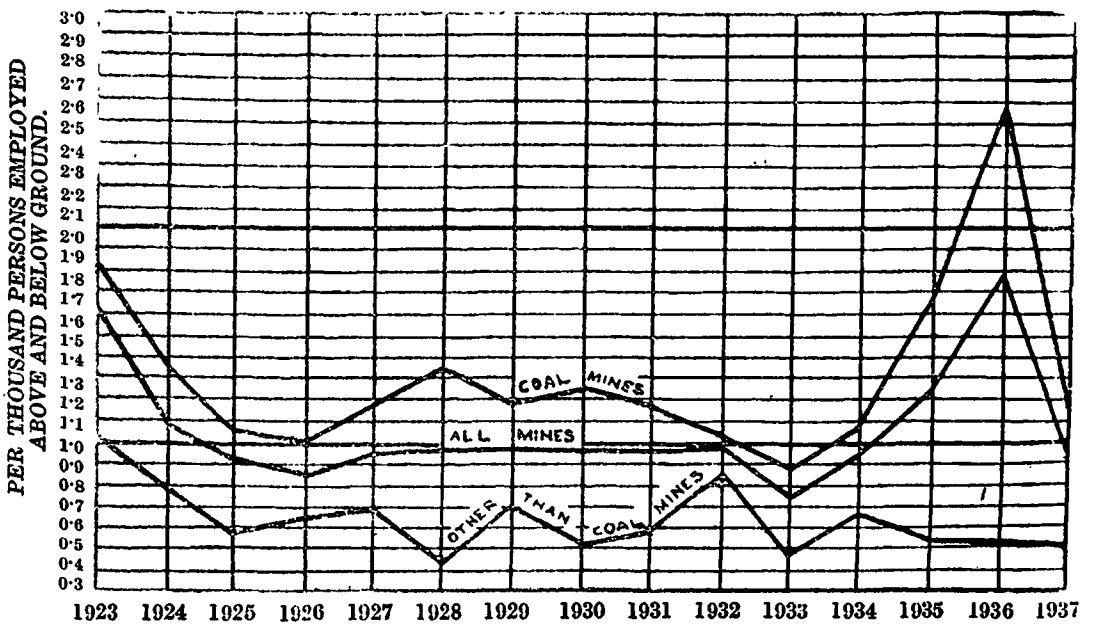
Miscellaneous on the surface.—Three fatal accidents and 75 serious accidents of this kind took place on the surface.

Accidents excluded from the statistics.—Twenty-four accidents causing 24 deaths were excluded from the statistics for reasons which are given in Appendix II.

Death rates.—The death rate per thousand persons employed above and below ground was 0·93 which was less than the rates in 1935 and 1936. The average rate for the preceding five years was 1·13. At coal mines the rate was 1·17, as compared with 2·58 in 1936. At mines other than coal mines the rate was 0·50, as compared with 0·53 in 1936.

The chart below shows graphically the variation in the death rate during the period 1923-37.

CHART SHOWING THE DEATH RATE
FROM ACCIDENTS DURING THE PERIOD 1923-1937.



From the above it will be seen that the death rate has fallen considerably. The high rate in 1936 was due chiefly to an explosion in a coal mine which caused the loss of 209 lives.

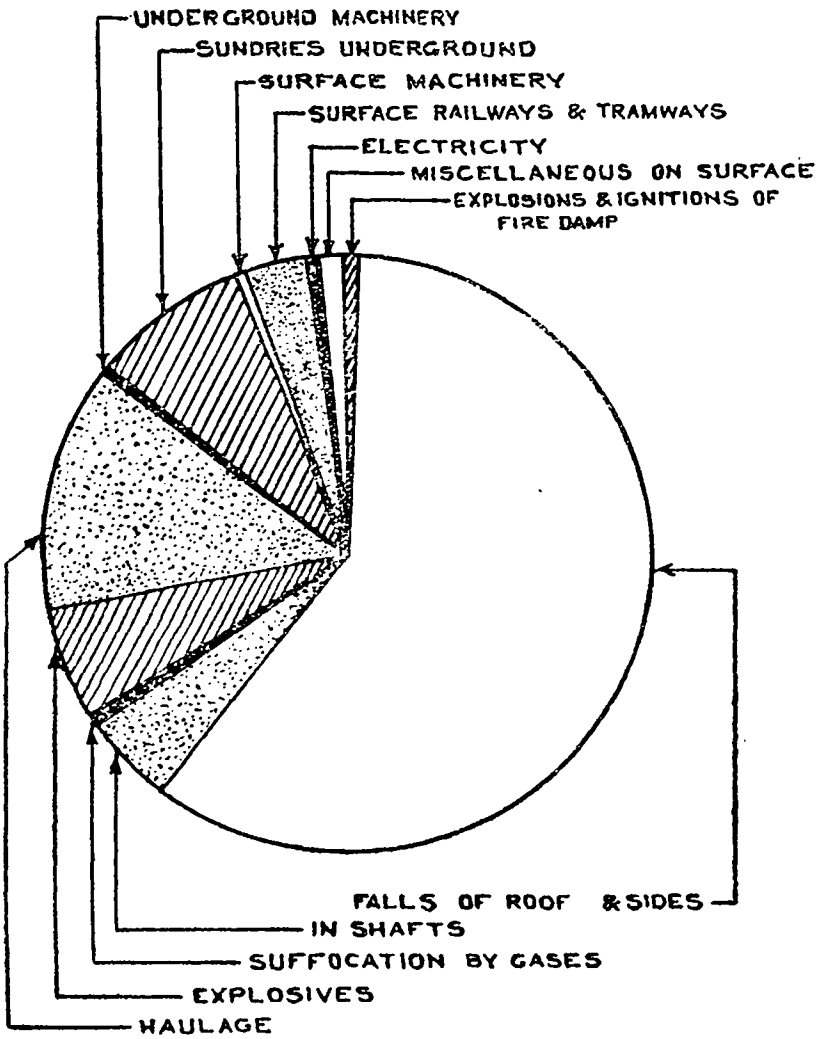
The death rate per million tons raised at coal mines was 8·95, while that of the preceding five years was 11·12.

Deaths occurring in each class of mines were as follows:—200 in coal mines, 2 in iron ore mines, 12 in mica mines, 11 in limestone mines, 4 in stone mines, 8 in copper mines, 1 in a chromite ore mine, 4 in salt mines, 1 in a magnesite mine and 5 in manganese mines.

Two persons lost their lives due to explosions and ignitions of fire-damp, 78 persons lost their lives by falls of roof; 70 by falls of sides; 12 in shafts; 2 by suffocation by gases; 15 by explosives; 33 by haulage; 22 by other accidents underground; 2 by electricity and 12 on the surface.

The accompanying chart shows the relative importance of the various cases of accidents in coal mines during 1937.

CHART SHOWING
DISTRIBUTION OF CAUSES OF PERSONS KILLED IN AND ABOUT COAL MINES IN THE YEAR 1937.



A list of the fatal accidents appears in Appendix II, Table I, where each is briefly described. The details of certain accidents are reported at greater length as follows :—

FALLS OF ROOF.

No. 63.—The Budroochuck Coal Mining Company, Limited's Budroochuck coal mine.

(Three persons killed and one injured.)

This accident occurred on a main dip haulage road in a development district of No. 14 seam which is 25 feet thick. The haulage road passes

through a series of faults and at place of accident it was against the roof and had been made 6 feet in height. Plan No. 1 shows the place of accident.

The deceased and their companions were engaged in driving dip and rise galleries off the bottom level of the haulage road. At the end of their relay they were proceeding outbye and just as they reached the place of accident the mass of roof, as indicated on the plan, fell without any warning. The two assistant overmen in charge of the district stated that the roof that fell had been tested regularly and the last examination was made two hours before the accident, when the roof appeared to be sound. The roof of No. 14 seam in this particular area varies considerably and on the rise and dip sides of place of occurrence supports had been set because of the unsound roof.

In spite of the fact that the roof at place of accident was considered to be sound, in view of the bad roof on the rise and dip sides, it is considered that supports should have been set at the junction of the galleries as a precautionary measure. The management agreed to timber systematically the junction of all galleries in this area where the roof was disturbed and likely to be unsound with a view to preventing a recurrence of this type of accident.

Fall of Side.

No. 45.—The Dyers Stone Lime Company, Limited's Salaiya Paharhai Limestone mine.

(Nine persons killed.)

This accident occurred in a limestone quarry, 220 feet long and 100 feet wide. Plan No. 2 will indicate conditions before and after the accident.

The quarry was a comparatively new one as it was opened in June 1936. The following description of the accident is given by Dr. D. Penman, who enquired into the accident :—

" The actual limestone deposit is overlain by a deposit of red earth and clay varying in thickness according to the position of the deposit, the slope of the beds, and the erosion that has taken place in the limestone.

Figure 7 shows a view of part of the east side of the quarry and gives an idea of the nature of the limestone deposit and the overburden. The deposit is contorted due to earth movements so that the slope of the limestone beds varies within short distances both in degree and in direction. Limestone is comparatively easily dissolved by running water and as a result the deposit has been ' leached ' or eroded out at intervals and these gaps filled by clay or earth in which pieces of limestone are embedded.

The number of workers employed in the quarry varied from 200 to 400 persons according to the supply of labour. The bulk of the labour was employed in carrying the limestone out of the quarry and removing the overburden. In places the limestone had to be blasted.

There were several pathways into the quarry—one on each of the south, east and west sides and other pathways on the north side. The quarry was not being extended on the south side and work in this part of the quarry

was confined to the removal of limestone from the floor of the quarry at a distance of about 15 feet from the face of the side which fell.

The south side of the quarry across a width of about 75 feet suddenly collapsed and the debris, consisting of blocks of limestone, earth and clay was debouched over practically the whole width of the quarry and for a distance of approximately 35 feet from the original face of the side at surface level. Nine persons—seven men and two women—were caught by the fall and either partially or completely buried by it. These nine persons were killed. Five bodies were recovered the same day, two were recovered on the 27th February, one on the 28th February, and one on the 2nd March.

Figure 5 shows the appearance of the place of accident after the fall and the approximate positions of the persons killed. Eight persons—five men and three women were injured. None of these persons appear to have been seriously injured and they are all expected to recover.

The accident was due to a collapse of the south side of the quarry as described. The collapse of the side was due to a number of factors as follows :—

(*a*) The character of the limestone deposit. The beds of limestone are lying at an inclination of between 20 and 25 degrees to the horizontal in a northerly direction. The limestone is not massive, *i.e.*, the deposit is not homogenious throughout. It consists of layers of limestone of varying thickness interlain with thin laminae of clay. The limestone beds are also broken up to some extent by joint planes. The upper surface of the limestone deposit is irregular in shape as is shown in Figure 2, and further the amount and direction of the inclination of the beds is not constant.

(*b*) There was and is a considerable thickness of red earth and clay lying on the limestone beds adding to the weight and thrust against the beds in the direction of the slope of the latter. There exists little cohesion between the earth and clay and the limestone beds.

(*c*) On one side of the fall there was a well pronounced joint plane with greasy surfaces. This plane is shown in Figures 1 and 5.

(*d*) On the other side of the fall the limestone had been leached out or eroded so that the thickness of the red earth and clay overburden was thicker at that side than on the side next the joint plane mentioned in (*c*).

(*e*) There had apparently been heavy rain on the night of the 25th February—the night before the accident. This rain may have and probably did contribute to the collapse by lubricating the joint plane mentioned, the joints and bedding planes of the limestone and by softening the superficial earth and clay. The side was released by the pronounced joint plane already mentioned and by the cutting of the limestone in the deeper part of the quarry. The weight of red earth and clay pressing against the limestone caused the latter to slip with the result that there was a general sliding of the limestone downhill and a subsequent collapse of the overburden.

All the witnesses examined stated that there was no indication of a fall likely to take place. The manager stated that he was at the place at 2-30 p.m.—about an hour before the accident and did not notice anything wrong. There was no sign of any movement and no one said to him that there was any risk of a fall. The agent deposed that he was near the spot at noon on the day of the accident and he did not notice any danger. From my observations I am of the opinion that it was not likely that there were any ordinary signs of an imminent fall. If the same conditions had prevailed on the north, east or west side of the quarry such a fall would not have occurred as on the north side the limestone beds dipped away from the place of work and on the east and west sides the beds of limestone lay in a horizontal direction.

Regulation 38 of the Indian Metalliferous Mines Regulations requires that " the sides of open workings shall be sloped, stepped or secured in such a manner as to prevent danger from falls of material".

There was a travelling foot-path on the face of the side which fell so that at one part of the side the face was stepped twice (see Figure 4).

The foot-path appeared to be of the requisite width as required by Regulation 41-A of the Indian Metalliferous Mines Regulations. But I do not consider that the foot-path amounted to stepping the sides as required by Regulation 38. The foot-path was sloping and while it might have constituted a suitable "step" at its beginning it did not so conform at its end and for a considerable part of its length. Moreover, the foot-path did not extend over the whole length of the face but only a part of it.

The sides of the excavation were sloped only very slightly as may be seen from the sketches Figures 2 and 3 (Plan No. 2) and I do not consider them to have been adequately sloped.

The amount of stepping or sloping of the side of an excavation depends on the nature of the ground. If the ground is throughout of hard stone and not highly inclined very little slope may be necessary to secure safety. But if the ground is soft and the deposit is in layers, and highly inclined, as in this case, very considerable slope or definite and frequent stepping is necessary. Such sloping or stepping had not been done."

Proceedings were instituted against the agent and the manager.

As a result of this accident a code of instructions specifying the amount of the slope of the sides and the nature of the stepping which in normal cases might be considered adequate, was issued in Circular No. 3 (Appendix No. IV, Statement No. 19) to the owners of this mine and to the owners and agents of all other working limestone mines.

In shafts (whilst Ascending or Descending by Machinery).

No. 167.—The Bengal Coal Company, Limited's Banksimulla (Nos. 7 and 8 pits) coal mine.

(Three persons killed.)

This accident occurred at a shaft, 16 feet diameter and 925 feet deep, at which sinking had just been finished. This shaft passes through two important seams—the Koithi and the Poniati.

The following description of the accident is given by Mr. G. S. Cameron, Inspector of Mines, No. 2 Circle, who enquired into the accident :—

"The sinking bucket in use was 3'-6" diameter at the top and 2'-8" at the bottom. It was 3'-8" high. The body was formed of ¼" sheet iron. The bow of the bucket was formed of 1¾" mild steel. The maximum weight of the bucket with load was approximately 1 ton 10 cwt. The bucket itself weighed 9 to 10 cwt. * * * *

Circumstances leading up to the accident.

The accident occurred at 7-50 A. M. during the changing of the shifts. What actually happened immediately prior to the occurrence is described in the evidence of Ram Bachan Singh, a day-shift pump khalassie, who went down on the wind before that on which the accident occurred.

He states that he, Kali Mochi and Bhonda Pasai, also day-shift pump khalassies, went down in the bucket to the Koithi seam inset, where he got out, and Basudev Dass, a night-shift khalassie, got in to go up. The other two day-shift khalassies were to be let off at the 5 feet seam on the way up, and the night-shift khalassies from there taken to the surface. Ram Bachan then states that he steadied the bucket in mid-shaft by a long hook for the purpose. One of the men in the bucket then rapped three, and the bucket was raised. A little later, he heard a sound in the shaft, but he did not pay much attention to it, as by that time he was about 15 feet away from the shaft in the inset. He heard nothing falling in the shaft.

From this point it is necessary to refer to the evidence of the banksman, winding engineman and the manager. The banksman states that after the bucket had been lowered with the three pump khalassies, he heard the signal, three raps, to raise, and repeated the signal to the winding engine khalassie. He says at that time the rope was quite stationary. A little later he heard a very loud noise in the shaft, and immediately gave the signal to stop. The engine was stopped at once. The engine khalsassie also heard the sound and stopped the engine at the same time as the banksman signalled.

At the time of the occurrence the manager was on the surface at No. 7 pit, 150 feet distant. In his evidence he states that he was looking towards No. 8 pit and saw the rope swinging from one side of the shaft to the other, and afterwards gradually steady itself. At the same time he heard a slight noise, and realised that something was wrong. He immediately proceeded to No. 8 pit scaffold. From the amount of rope on the drum and enquiries he made from the banksman, he estimated that the bucket was a short distance above the Koithi seam inset. He then sent a man down No. 7 pit with instructions to go through the connection in the 5 feet seam, to No. 8 pit and try and locate the position of the bucket. This man, on arriving at No. 8 pit, rapped "three" on the pipes and the bucket was drawn to the surface, when it was seen to be in a damaged condition. The bow of the bucket was fractured just below the inverted "U". One of the arms had been partially straightened out, and the side of the bucket was slightly flattened as if it had struck either a bunton or the side of the shaft. The clearance between the buntons and the top rim of the bucket was 6'—3".

It was then realised that the three pump khalassies had fallen out of the bucket, which, however, still contained an empty kerosene tin and a safety lamp. A new bucket was attached to the rope as soon as possible and the manager accompanied by three fitters descended to the bottom of the shaft (*i.e.*, the platform at the inset of the Poniati seam). The bottom of the sump is 20 feet below the platform. In the platform there is a hole $7' \times 7'$ to allow the bucket to pass through for bailing purposes. The manager found that all three bodies had fallen straight through the hole into the sump. * * * *

Inspection and Enquiry:— * * * * As already stated the bow of the bucket was fractured, and the side was slightly flattened. Apart from these defects there were no marks of fresh indentations either on the rim or the side of the bucket. There is, however, some doubt as to how and when the flattening of the side of the bucket was caused and also what was responsible for one arm of the bow being partially straightened out. No one could state definitely whether the flattening (slight) of the side of the bucket occurred before or when the accident occurred.

Regarding the partial straightening of the bow arm two theories suggest themselves :—

(*i*) That when the bow broke the extra strain thrown on one arm of the bow caused it to straighten.

(*ii*) That after the bow broke the bucket commenced to swing with the result that the rim of the bucket caught momentarily under one of the buntons, and the extra strain thus produced caused the remaining arm of the bow to straighten out.

However, as already pointed out, there were no fresh marks of impact either on the rim of the bucket or on the buntons.

An examination of the fracture revealed that at the point of fracture the metal was definitely crystalline except for a dark area $\frac{7}{8}'' \times \frac{5}{16}''$ on the underside of the bow which appeared to be a flaw in the metal. * * * * *

The colliery fitter states that he examines the bucket twice in each shift. He examined the bucket at No. 8 pit at 6 A.M. and saw nothing wrong with it. He saw no crack or other defect on the bow. * * * *

Examination of Shaft.—" On the following day I descended No. 8 pit with the Chief Mining Engineer and the manager and made a thorough examination of the shaft between the top of the shaft and the Koithi-seam. Each bunton was examined in turn. No indication of any bunton having been struck by the bucket could be found. Similarly the brickwork into which the buntons were built had not been disturbed. No stone appeared to have fallen from the side of the shaft, but as the side of the shaft is constantly wet, it would be difficult to locate such a place, even if stone had fallen. * * *

Expert examination of the fractured metal revealed that the fracture of the mild steel bow was due to " corrosive fatigue " coupled with shock. The Inspector of Mines and the Chief Mining Engineer arranged for separate pieces of the fractured bow to be examined. Both examinations revealed that the primary cause of the fracture of the mild steel bow was due to " corrosive fatigue ". The Metallurgical Inspector, Indian Stores Department, who conducted one of these examinations reports :—

"I would suggest that where human life is dependent on similar gear it should be annealed at a temperature not less than 750 degrees C., nor more than 870 degrees C., immediately after being smithed. It should also be annealed at intervals of not less than twelve months to counteract the work-hardening effect of the severe bruising found on the sample, and after a life of, say, 5 years, it should be scrapped on account of the possibility of the development of corrosion-fatigue cracking."

These recommendations are quoted in the hope that where safety to life is dependent on similar gear owners, agents and managers of collieries will take steps to ensure that annealing is properly done.

SUFFOCATION BY GASES.

No. 195.—The North West Coal Company, Limited's Ena-coal mine.

(Two persons killed).

This accident occurred in a sinking shaft, 14 feet diameter and 126 feet deep, being sunk to No. 10 seam at a depth of 150 feet. The following description of the accident is given by Mr. N. Barraclough, Inspector of Mines, No. 1 Circle, who enquired into the accident:—

"The relay in which the accident occurred commenced at 7 A. M., and the sinkers were engaged in drilling sumping holes until 9-30 A. M. when they were withdrawn from the shaft, and seven sumping holes were fired. The seven sumping holes were each charged with seven 2 oz. cartridges of gelignite, and they were stemmed with sand. As the make of water in the shaft was about 2,000 gallons per hour, between the time of charging and firing about 2 feet of water generally collected in the bottom of the shaft. After the shots had been fired at 9-30 A. M. the sinking kibble was run up and down in the shaft in order to clear the smoke. After half an hour the chargeman went down and examined the sides of the shaft, and after he returned to the surface three men went down to bail water, and at least three kibbles of water were emptied into the shaft from the surface in order to absorb any fumes which remained. Fifteen minutes later four more men went down the shaft to assist in bailing at the shaft bottom. At 11 A. M. the manager descended the shaft to make his daily inspection and on reaching the shaft bottom he found the men coughing. Although the manager thought that the men were coughing unnecessarily he brought three of them up to the surface with him, and the remaining four followed in the next kibble. These men remained on the surface for an hour before resuming work. The contractor, Sultan Mohammad, the chargeman, Girdhari, and another man then descended and filled about ten kibbles with water before the remaining men resumed work. Altogether 35 to 40 kibbles of water were raised after blasting. The men continued work up to 1-45 P. M. when they returned to the surface at the termination of work in their relay. Except for slight coughs the men were all right, but between 3 and 5 P. M. their coughs grew worse, and they felt a sense of suffocation. They were attended by the compounder at the colliery, and as two or three of them began to exhibit distressing symptoms, the doctor was called. At 7—30 P. M. Mahabir Singh had developed fever, his breathing was stertorous

and he was coughing frequently. The doctor administered smelling salts but he expired at 9-30 P. M. The remaining fourteen men were removed to Dhanbad hospital at about 11-45 P.M. where they were kept as in-patients for observation. As the condition of Akal Majhi, Dhanu Dhobi and Dhanu Routh was precarious, oxygen was administered and their condition improved under this treatment. Akal Majhi, however, died four days later, but the other thirteen patients recovered.

The accident was clearly due to absorption by the deceased and the injured persons of nitrous fumes. Nitrous fumes are produced when certain nitro-glycerine explosives are fired, particularly if the detonation is not complete, and some of the explosive burns instead of detonating. These fumes have an extremely irritating action upon the respiratory passages and are highly poisonous. The extreme, symptoms do not usually manifest themselevs for several hours after exposure, and during the early stages of exposure to the fumes a persons may feel ill and cough violently after which he appears to recover. Several hours later, however, more pronounced symptoms make their appearance, their intensity depending upon the degree of exposure to the fumes. If large quantities have been inhaled, bronchitis and pneumonia may develop and death may ensue within forty-eight hours. Nitrous fumes are very soluble in water."

The staff in charge of the shaft sinking was thoroughly experienced. The petty contractor had sunk no less than five other shafts. The chargeman was also an experienced shaft sinker. In addition to the chargeman there was a fully qualified overman who examined the shaft before the sinkers descended after blasting, but as he did not remain in the shaft for any considerable time he was not affected.

This is an unusual type of accident, but in order to guard against a recurrence it is considered that artificial means of ventilation should be introduced when sinking shafts extend beyond a depth of 100 feet.

BY EXPLOSIVES.

No. 102.—Messrs. Anandamoyee Coal Company's Khas Jinagora coal mine.

(Three persons killed and two seriously injured.)

This accident occurred while preparations were being made for blasting in a gallery in the middle section of No. 10 seam. It appears that about 5 lb. of loose gunpowder had been taken to the place. According to the evidence of the overman in charge of that part of the mine three persons were set to drill holes to blast down a stone band in the roof. Work was commenced at about 9 A. M. on day of accident and at about 2 A. M. the overman found that three holes had been drilled but the shot-firer had not arrived to conduct blasting operations. When the overman visited the place later he noticed that one of the men was charging a hole, and the shot-firer with two other men was sitting on the floor of the gallery, and a canister was placed between them. The lid of the canister had been removed and the overman saw paper casings in the form of cartridges.

There were two lighted "mug lamps"—one on each side of the canister and only a short distance from it. The shot-firer was close to the canister and he was smoking a "biri".

From the evidence recorded by the officer who investigated this accident it is evident that cartridges of gunpowder were being prepared at the site of the accident. The shot-firer, who subsequently died as a result of his injuries sustained at time of accident, admitted taking loose gunpowder into the mine.

It seems that a "mug lamp" was suspended from the roof for better illumination while a hole was being charged, and that this lamp fell from the roof to a point near the canister where some loose gunpowder was ignited, resulting in the accident.

Accidents of this nature are easily avoided by exercising reasonable care and complying with the Coal Mines Regulations. Regulation 102 requires that gunpowder shall not be issued for use in blasting operations in a mine or used in a mine, except in the form of cartridges.

Criminal proceedings were instituted against the manager and the magazine-keeper.

SUNDRIES UNDERGROUND.

No. 6.—The Raneegunge Coal Association Limited's Kustore coal mine.

(Two persons killed and three injured.)

This accident occurred in No. 13 seam at a point where coal is delivered into a bunker from No. 15 seam. The coal is loaded into 15 cwt. capacity tubs in No. 15 seam and then taken to the top of a chute which consists of a vertical shaft, 6 feet diameter and 118 feet deep, between 13 and 15 seams. From the bottom of the shaft an inclined drift, $7' \times 7'$ and 138 feet long on a slope of 1 in 1 leads to a large bunker situated in 13 seam. The coal in the 15 cwt. tubs is delivered into the vertical shaft through a tippler and then falls into the bunker below where it is loaded into 3-ton mine cars. The Inspector of Mines, No. 1 Circle, who enquired into this accident gave the following description of the accident:—

"The bunker is a composite structure of steel plates, girders and brick-work. Sometime during the night shift of 6th-7th January it was found that a jamb had occurred in the shaft or drift and coal was not falling into the bunker after being delivered from No. 15 seam. The assistant manager was informed of this at 6 A.M. on 7th January and after reporting the matter to the manager he proceeded to No. 15 seam to arrange for water to be run into the chute in order to loosen the coal causing the jamb. Instructions had previously been sent to the staff at the bunker to stand clear until the coal was loosened. Water was run into the shaft for about fifteen minutes without result, and the assistant then stopped the water and proceeded to 13 seam in order to ascertain conditions at the bunker end. On the way he was informed that the coal had fallen away and on arriving at the bunker found coal and water falling past the slide gate which was open. The gate was closed and the water allowed to escape through the perforations in the plate. Accompanied by the head fitter the assistant then inspected the bunker. They both affirm that they found everything in order and that the side walls had

not been damaged in any way by the fall of coal. The assistant then gave orders for loading to commence and stood by until eleven mine cars, representing 33 tons of coal, had been loaded and drawn away. After giving orders for no more coal to be dumped from No. 15 seam until he had an opportunity to examine the shaft and incline he left the place. Following the assistant's departure three more mine cars were loaded. As the fifteenth car was being loaded there was a sudden loud noise of coal falling into the bunker and the south wall of the bunker burst open, precipitating coal on the tram line below. There were six persons working in the vicinity, of whom only one escaped injury. Two of the remaining five were buried beneath the broken wall and coal and were killed instantly, while the other three sustained serious injuries. Following the accident it was found that about 10 to 12 tons of coal had fallen from the bunker on to the tram line. Among the loose coal was a steel girder. It appears that during the sinking of the shaft girders were fitted into the sides in order to provide seatings for a pump. Two or three of these girders were left in the shaft after the commencement of dumping operations. In my opinion the girder which was found with the coal was the cause of the coal jamming in the shaft for it is probable that the coal was held up by the girder which had fallen from its original position and was jammed at the junction of the shaft and drift ".

Since the bunker had been put into use in April 1936 approximately 30,000 tons of coal had passed through it at time of accident. On at least two occasions the bunker and the shaft-incline above had been filled with coal up to No. 15 seam, and the bunker had proved strong enough to withstand the pressure. The Inspector of Mines considered that the coal which caused the damage amounted to about 10 tons and probably fell from a height of 128 feet down a slope of 1 in 1.

The south wall of the bunker was 24 inches thick, built of box bricks in cement and sand and erected on two 12 inches girders laid side by side. Retaining walls had also been built up to the level of the girders but they formed no support to the wall itself.

Since the accident all the girders in the shaft have been removed and the bunker strengthened. Although this accident could not be foreseen, it clearly indicates the necessity to keep all shafts and drifts, which are used for work of this nature, clear of all obstructions.

SECTION IV.—Prosecutions and amendments to the Act, Regulations, Rules and Orders made thereunder.

Prosecutions.

During the year judgments in prosecutions were delivered as follows: —

Two joint owners of a mica mine in the Hazaribagh district were prosecuted for failing to appoint a manager for the mine; for failing to maintain a register of persons working in the mine; for failing to maintain the inspection book and for failing to keep the sides of one of the inclined shafts and the underground workings secure. One of the accused only was fined Rs. 25 as the other had died.

Two miners of a coal mine in the Jharia coalfield were prosecuted for working in a place in which they had not been ordered to work and for cutting coal from a pillar without authority. The case was withdrawn as the accused could not be traced.

The late manager and the assistant in-charge of the magazine of a coal mine in the Jharia coalfield were prosecuted for issuing gunpowder not in the form of cartridges and for preparing cartridges in a place that was not approved for the purpose. The former was fined Rs. 100 and the latter Rs. 50.

The owner of a coal mine in the Jharia coalfield was prosecuted for working the mine without a qualified manager; for failing to maintain reports required under Regulation 70, and for failing to maintain correctly the attendance registers. The case was withdrawn.

The owner and the manager of a coal mine in the Jharia coalfield were prosecuted for employing more women underground than the permitted percentage and for not maintaining a correct register of the persons employed underground. The owner was fined Rs. 100 and the manager Rs. 50.

The agent of a coal mine in the Jharia coalfield was prosecuted for allowing persons to work and raise coal from a prohibited area contrary to orders issued by the Inspector of Mines. He was fined Rs. 30.

The owner and manager of a coal mine in the Jharia coalfield were prosecuted for failing to fence off some galleries leading from a quarry; for failing to fence an incline; for not providing proper foot-paths in a quarry; for failing to slope the sides of the quarry to prevent danger from falls of material and for not maintaining plans of the underground workings of the mine as is required by the regulations. The owner was fined Rs. 200, and the manager Rs. 100.

The owner of a coal mine in the Jharia coalfield was prosecuted for not having properly stepped or sloped or otherwise secured the sides of the quarries and for also failing to keep fenced the top of the quarries. He was fined Rs. 50.

The agent and manager of a coal mine in the Jharia coalfield were prosecuted for failing to step, slope or secure the sides of quarry with the result that a fatal accident occurred by a fall of side. The agent was fined Rs. 500 and the manager Rs. 200.

The owner and manager of a coal mine in the Jharia coalfield were prosecuted for not issuing gunpowder in the form of cartridges; for not appointing a competent person in writing for preparing cartridges and for not providing a proper place for the preparation of cartridges. The owner was fined Rs. 50 and the manager Rs. 25.

The owner and temporary manager of a coal mine in the Jharia coalfield were prosecuted for employing women underground in contravention of regulations and for failing to appoint a person in authority underground while work was in progress. The former was fined Rs. 50 and the latter Rs. 25.

The manager and attendance clerk of a coal mine in the Raniganj coalfield were prosecuted for failing to keep a correct record of the number of persons going underground, and for employing more women underground than the permitted percentage. The manager was fined Rs. 50 and the attendance clerk Rs. 100.

The agent, manager, and register clerk of a coal mine in the Jharia coalfield were prosecuted; the agent and manager for employing women underground in contravention of the regulations; and the register clerk for failing to keep a correct record of the persons working underground in the mine. The agent and manager were fined Rs. 250 each and the attendance clerk Rs. 30.

The owner and manager of a coal mine in the Jharia coalfield were prosecuted for failing to keep a correct record in the register of persons working underground in the mine. The owner was acquitted and the manager fined Rs. 75.

For the same offence the acting manager and register-keeper of a coal mine in the Jharia coalfield were prosecuted. The case was withdrawn.

The owner, manager and register clerk of a coal mine in the Jharia coalfield were prosecuted; the owner and manager for employing women underground in the mine in contravention of the regulations; for failing to maintain a correct register of the persons working underground in the mine; for failing to appoint, in writing, some person in authority underground while work was in progress; and the register clerk for failing to keep a correct record of the number of persons going underground and returning therefrom. They were each fined Rs. 50.

The owner and agent of a coal mine in the Jharia coalfield were prosecuted for failing to keep a separate tracing of a surface plan; for failing to keep the sides of the incline secure, and for failing to fence certain inclines and inadequately fencing others, and also for not fencing two air shafts and a quarry. They were fined Rs. 50 each.

The owner, agent and manager of a coal mine in the Raniganj coalfield were prosecuted for employing an excessive number of female workers in the underground workings of the mine; for failing to enter the names of female workers underground in the register; and for failing to have available copies of the Act, the regulations and rules and amendments thereto. The owner and manager were fined Rs. 50 each and the agent Rs. 200.

The owner and manager of a coal mine in the Jharia coalfield were prosecuted for failing to provide gates at the entrance of the inclines; for failing to slope, step or secure the sides of a quarry in such a manner as to prevent danger from falls of materials; for failing to post up outside the office of the mine a notice in the prescribed form stating the time of commencement and of the end of work at the mine; for failing to maintain a register of workpersons underground; for failing to have available a stretcher at the mine; for failing to maintain a separate tracing of the surface plan; and for failing to maintain an up-to-date plan of the section workings of an incline. They were fined Rs. 50 each.

The three joint owners and manager of a coal mine in the Jharia coalfield were prosecuted for failing to slope, step or keep secure the sides of a quarry. They were fined Rs. 50 each.

The owner, manager, overman and attendance clerk of a coal mine in the Jharia coalfield were prosecuted ; the attendance clerk for not maintaining a correct register of the work-persons and the owner and manager for employing women underground in excess of the permitted percentage. They were fined Rs. 20 each.

For the same offence the agent, manager and attendance clerk of a coal mine in the Jharia coalfield were prosecuted. The agent was fined Rs. 250, the manager Rs. 50 and the attendance clerk Rs. 100.

The receiver and manager of a coal mine in the Jharia coalfield were prosecuted for using the surface tramline which passed over unstable workings in contravention of the orders imposed by the Inspector of Mines. They were fined Rs. 30 each.

The owner, agent and register clerk of a coal mine in the Jharia coalfield were prosecuted ; the owner and agent for failing to submit a written notice authorising a competent person to act as manager of the mine ; for employing women underground in excess of the permitted percentage ; for failing to have the required inspections made by a competent person ; and the register clerk for failing to keep a correct record of the persons employed underground. The owner and agent were fined Rs. 50 each and the register clerk Rs. 25.

The two joint owners, the agent and manager, of a coal mine in the Jharia coalfield were prosecuted for failing to post a relay notice outside the office of the mine ; for failing to maintain a complete surface plan of the mine ; for failing to slope back properly the sides of an incline and for failing to fence an incline. The owners were fined Rs. 20 each, the agent Rs. 30 and the manager Rs. 50.

The agent, manager and register clerk of a coal mine in the Jharia coalfield were prosecuted ; the agent and manager for employing women underground in excess of the permitted percentage and for allowing persons to remain underground after the end of the relay ; the register clerk for failing to keep a correct register of the persons working underground. The agent was fined Rs. 100, the manager Rs. 250, and the register clerk Rs. 25.

The acting manager, the man in charge of the magazine and a miner of a coal mine in the Raniganj coalfield were prosecuted ; the acting manager for permitting the use of loose gunpowder underground and for failing to see that explosives left over at the end of the relay were returned to the magazine ; the man in charge of the magazine for issuing loose gunpowder to miners for use underground instead of in the form of cartridges ; and the miner for using loose gunpowder underground and for failing to return to the magazine the unused gunpowder at the end of the relay. The case is still pending.

The manager and attendance clerk of a coal mine in the Raniganj coalfield were prosecuted ; the attendance clerk for failing to keep a correct record of the number of persons working underground ; and the manager for allowing women underground without issuing passes to them ; and for em-

ploying an excessive number of women underground. The manager was fined Rs. 25 and the attendance clerk Rs. 10.

The owner of a coal mine in the Raniganj coalfield was prosecuted for failing to appoint a competent manager. He was fined Rs. 400.

The two joint owners and the agent of a coal mine in the Pench Valley coalfield were prosecuted for failing to hand over to the new owner all plans, books and other records required to be kept under the Act. The owners were acquitted and the agent was fined Rs. 400.

The owner, acting manager and register clerk of a coal mine in the Raniganj coalfield were prosecuted; the owner and acting manager for employing women underground in excess of the permitted percentage and for allowing persons to work underground after the time fixed for the termination of the relay; and the register clerk for not maintaining a correct register of persons going underground. The owner was fined Rs. 130, the acting manager Rs. 50 and the register clerk Rs. 20.

The manager and attendance clerk of a coal mine in the Raniganj coalfield were prosecuted; the manager for failing to submit the change in the time of the relays to the Chief Inspector of Mines; the attendance clerk for failing to maintain a correct record of the persons going underground and returning from underground daily. The manager was fined Rs. 100 and the attendance clerk Rs. 50.

The owner and manager of a china clay mine in the Bhagalpur district were prosecuted for allowing women to carry clay from the underground workings. They were both acquitted.

The agent, manager and attendance clerk of a coal mine in the Raniganj coalfield were prosecuted; the agent and manager for employing an excessive number of women in the underground workings of the mine; the attendance clerk for failing to maintain a correct record of persons at work underground. The agent was fined Rs. 250, the manager Rs. 125 and the attendance clerk Rs. 25.

The owner of a coal mine in the Jharia coalfield was prosecuted for permitting persons to go underground in contravention of written orders from the Inspector of Mines; for permitting women underground in excess of the number permitted; for employing a child in the underground workings of the mine; for failing to maintain a correct record of the persons working underground; for working the mine without a qualified manager and for failing to appoint a person in authority underground while work was being carried on. He was fined Rs. 300.

The manager, attendance clerk and night shift sirdar of a coal mine in the Raniganj coalfield were prosecuted; the manager for employing an excessive number of female workers underground; the attendance clerk for failing to keep a correct record of the number of persons going underground; and the night shift sirdar for sleeping while on duty. The manager and attendance clerk were fined Rs. 25 each and the sirdar Rs. 10.

The owner of a coal mine in the Jharia coalfield was prosecuted for employing persons to work in a prohibited area in contravention of written orders from the Inspector of Mines. He was fined Rs. 25.

The owner, overman and attendance clerk of a coal mine in the Jharia coalfield were prosecuted; the owner for employing an excessive number of women underground; for failing to authorise a competent person to act as manager and for failing to arrange for the inspection of underground workings by a competent person; the overman for absenting himself from duty while work was in progress in the mine and for failing to make the inspections required; and the attendance clerk for failing to maintain a correct record of the persons at work underground. The owner was fined Rs. 25 and the other two Rs. 10 each.

The owner, manager and register clerk of a coal mine in the Jharia coalfield were prosecuted; the owner and manager for employing an excessive number of women underground; for failing to arrange for a person in authority to be constantly underground while work was being carried on and for failing to keep fenced a quarry which was not in use or course of working; and the register clerk for failing to maintain a correct record of the number of persons working underground. The owner was fined Rs. 200, the manager Rs. 50 and the register clerk Rs. 20.

The manager and blasting mistry of a mica mine in the Nellore district were prosecuted; the former for not ordering the blasting mistry back to his working place when he found that he was on the surface, and the latter for not being present when miners were drilling a relieving hole after a misfired shot had occurred. The manager was fined Rs. 50 and the blasting mistry Rs. 25.

The agent and manager of a limestone mine in the Jubbulpore district of the Central Provinces were prosecuted for failing to slope, step or secure the sides of a quarry in such a manner as to prevent danger from falls of side. The agent was fined Rs. 1,000 and the manager Rs. 750.

Two prosecutions against an agent and a late owner were instituted for failure to submit annual returns within the prescribed date. They were fined Rs. 25 each.

Information was received of the following prosecutions instituted by mine officials against subordinate staff:—

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for firing a shot in a split gallery without giving sufficient warning or fencing off the other workings. He was fined Rs. 30.

An engine driver employed at a coal mine in the Pench Valley coalfield was prosecuted as he was found sleeping whilst on duty. He was fined Rs. 20.

An underground pump khalassie of a coal mine in the Raniganj coalfield was prosecuted for lighting a wood fire in the pump room. He was fined Rs. 40.

Amendments to the Indian Mines Act and to the Regulations, Rules and bye-laws made under the Act.

In Notification No. M-1055, dated the 27th January 1937, issued by the Government of India, Department of Industries and Labour, certain further amendments to the Supplementary Coal Mines (Temporary) Regulations, 1936, were published. The notification is reproduced in Appendix IV, Statement No. 3

In Notification No. M-1051, dated the 27th January 1937, issued by the Government of India, Department of Industries and Labour, further amendments were made in Appendix I to the Schedule to the Notification of the Government of India, in the Department of Industries and Labour, No. M-1051, dated the 1st October 1935. The notification is reproduced in Appendix IV, Statement No. 4.

In Notification No. M-966, dated the 30th January 1937, issued by the Government of India, Department of Industries and Labour, certain further Temporary Regulations were issued. They are reproduced in Appendix IV, Statement No. 5.

In Notification No. M-1055, dated the 1st February 1937, regulations prohibiting the employment of women underground in mines were issued. The notification is reproduced in Appendix IV, Statement No. 6.

In Notification No. M-1055, dated the 25th February 1937, issued by the Government of India, Department of Industries and Labour, further amendments were made in the Schedule to the notification of the Government of India in the Department of Industries and Labour, No. M-1051, dated the 1st October 1935. The notification is reproduced in Appendix IV, Statement No. 7.

In Notification No. 453-VII. M-7/37 Com., dated the 13th March 1937, the Government of Bihar, in exercise of the powers conferred by clause (a) of Section 30 of the Indian Mines Act, 1923 (IV of 1923) issued rules for the constitution of Mining Boards for both coal and other than coal mines. The notification is reproduced in Appendix IV, Statement No. 8.

In Notification No. M-1055, dated the 17th June 1937, issued by the Government of India, Department of Industries and Labour, all coal mines in Bengal, Bihar, the Central Provinces and Orissa were exempted for a period of three months from 1st July 1937, from the provisions of clause (j) of Section 29 of the said Act to the extent to which regulations made thereunder prohibited the entry of women into underground workings for purposes of employment. This exemption was subject to the conditions that the total number of women employed in the underground workings of any mine on any day did not exceed 5 per cent. of the total number of persons so employed. The notification is reproduced in Appendix IV, Statement No. 9.

In Notification No. M-966, dated the 10th July 1937, issued by the Government of India, Department of Industries and Labour, certain further temporary regulations were issued. They are reproduced in Appendix IV, Statement No. 10.

In a press Communique, dated the 10th September 1937, issued by the Government of India, Department of Industries and Labour, the employment of women underground in coal mines was totally prohibited with effect from the 1st October 1937. The communique is reproduced in Appendix IV, Statement No. 11.

In notifications Nos. 227-3314-XIII of 1936 and 228-3314-XIII of 1936, dated the 25th January, 1937, and No. 5800-1-M-5/1937—Com., dated the 15th July 1937, the Governments of the Central Provinces and Berar and the Government of Orissa made certain amendments to their rules. The notifications are reproduced in Appendix IV, Statements Nos. 12, 13 and 14.

Act No. XXIX of 1937.—An Act further to amend the Indian Mines Act, 1923, came into force on the 3rd December 1937. This is reproduced in Appendix IV, Statement No. 15.

In Notification No. P. 2, dated the 15th December 1937, issued by the Government of India, Department of Mines, a list of "Permitted" explosives and a list of approved types of shot-firing apparatus were issued. The notification is reproduced in Appendix IV, Statement No. 16.

By the end of the year bye-laws under Section 32 of the Act had been established at six hundred and thirteen coal mines and twenty-two mines other than coal. Amended Bye-laws were established in four hundred and fifteen coal mines. Bye-laws for the treatment of coal-dust had also been established in forty-four coal mines.

During the year seven circular letters were issued to owners, agents and managers of coal mines. They are reproduced in Appendix IV, Statements Nos. 17 to 23.

SECTION V.—GENERAL REMARKS.

Underground fires.

In my reports for the years 1932, 1933 and 1935 reference has been made to fires at several collieries and the precautionary measures taken to prevent the spread of these fires.

At the Khas Jharia group of mines "blanketting" work was done to prevent any further extension of the fire towards Jharia town and the Jharia-Pathardih main line of the East Indian Railway. Donations by the Raja of Jharia and the Jharia Mines Board of Health and the valuable assistance given by Rao Bahadur D. D. Thacker of Jharia have enabled the protective works in the vicinity of Jharia town to be continued.

In my Annual Report for the year 1933, reference was made to an outbreak of fire at the Kusunda group of collieries which traversed an area of old workings in several seams and threatened the stability of the Kari river due to the old workings beneath and in the vicinity thereof being on fire. Several large concerns which undertook protective measures at great cost to safeguard the river and adjoining mines continued to flush "muttee" and sand through boreholes in the river bed. Practically the whole of the old workings in Nos. 11-12 seams beneath the river have been completely stowed and the stowing of galleries in No. 13 seam in proximity to the river has been commenced. It is anticipated that these protective measures will be successful.

Due to the shallow depths, the contiguity and great thickness of some of the seams liable to spontaneous combustion and the fact that no provision was made when developing some of the old mines for isolating areas liable to spontaneous heating, the difficulties in working such mines where it is necessary to adopt precautionary measures for dealing with and isolating fires have been greatly enhanced in recent years.

Exclusion of Females from underground workings in Mines.

In February the Government of India issued regulations under the Indian Mines Act prohibiting the employment of women underground. It was intended that the regulations should come into force with effect from the 1st July 1937, but due to representations being made by various bodies Government decided to postpone for three months the date for the total exclusion of women from the underground workings in coal mines in Bengal, Bihar, the Central Provinces and Orissa, provided that the prescribed percentage for the year 1937 was not exceeded. On the 22nd September 1937, Government issued a press communique stating that no further extension would be granted and the total prohibition of the employment of women underground would come into operation with effect from 1st October 1937. There was agitation by the Labour Associations in the two major coalfields for higher rates in view of the exclusion of women from underground workings. Increased rates of two to three annas per tub, according to the capacity of the tub, were given at most collieries. There were no demonstrations on the 1st October when women were excluded from the mines. In a few isolated cases small batches of miners refused to go down the mine because they could not take their women. About a fortnight after the prohibition of female labour from underground there was a partial strike at a large colliery in the Jharia coalfield employing about 3,000 workers daily. About 300 underground workers stopped work until their rates had been increased. Other workers at the mine became affected. After three or four days increased rates were given and normal conditions were resumed. There were no other incidents in the coalfields and work was resumed in a normal way after the Durga Puja holidays. Many of the women excluded from underground workings have been found employment on screening plants, preparing inert dust for treating coal-dust, on general surface work and in quarries.

Health and Sanitation.

The Asansol Mines Board of Health held four special and eleven ordinary meetings during the year. Dr. L. Sen was Chief Sanitary Officer of the Board throughout the year except for a period of six weeks in May and June when Dr. S. Roy, Bacteriologist, officiated in his place. The year 1937 was healthier than the preceding three years. There was a decline in deaths for all ages and for infants while the upward trend in the birth-rate, noticed in 1936, was maintained in 1937. The death-rate among the colliery population was considerably lower than that of the general population. Both the upper and lower limits of monthly death-rate in the mining population were lower than that of the previous year. The rise in fever mortality in September and the following months coincided with the seasonal increase of malaria.

Epidemic cholera was conspicuous by its absence during the year. The majority of cases were of a sporadic nature. There were 252 attacks and 85 deaths during the year, as against 434 attacks and 180 deaths in 1936.

The incidence rate in collieries was 1·5 per 1,000, while that in villages was 0·48. Due precautions were taken by way of isolating the cases, segregation of contacts, adequate disinfection and protection of water supply. Inoculation was carried out in anticipation of an outbreak and also during the course of the disease. The total number of persons inoculated was 30,826, of whom half were miners and their family members.

The year was free from any epidemic of small-pox. Only 92 cases of small-pox were reported as against 925 in 1936. The majority of cases occurred during the pre-monsoon period. Vaccination and re-vaccination have been the chief means of fighting the disease. Particular attention was paid to the colliery population, specially imported labour, among whom a large number are either unprotected or have lost the protection offered by primary vaccination in their childhood. Altogether 64,669 vaccinations were performed, of which 16,331 were primary and 48,338 were re-vaccinations.

The number of Health Visitors for maternity and child welfare work was increased from six to seven. Each Health Visitor is in charge of an area extending over 4 square miles, including collieries and villages. 1,022 expectant mothers were visited at their homes by the Health Visitors. 38 cases were confined by them and 86 by trained dais under their personal supervision while 773 confinements were done by trained dais alone. Training classes for indigenous dais were organised in eight centres and an intensive course of training was held for three months followed by a period of retraining once a month. Certificates are being introduced in order to bring home to the general public the difference between a trained and certified dai and an untrained dai. 1,485 new confinements were followed up by the Health Visitors in course of their post-natal visits as against 1,290 in the previous year. The four Infant welfare centres maintained by the Board were attended by 179 infants and 169 toddlers and the attending mothers were taken through a course of health talks.

A Baby Week was organised by the Asansol Health and Baby Welfare Society in eight centres, the activities consisting of a Health Exhibition, Baby Show and Health Competitions. Adequate training was arranged for boys in first-aid and for girls in first-aid, home-nursing and mother-craft according to the syllabus laid down by the St. John Ambulance Association. Inter-school and inter-colliery ambulance competitions were arranged after training the candidates up to the senior first-aid standard. A junior inter-colliery competition was confined to manual labourers below the grade of sirdars.

A special survey of the incidence of leprosy among school children was undertaken. The percentage of leprosy was found to be 2·3 among 6,949 students examined in 165 schools, as against the incidence rate of 1·5 per cent. in the general population. 3,402 cases received treatment in fourteen Leprosy clinics out of 5,332 known cases. A leper day was successfully organised by the Leprosy Relief Association and the total collection by the sale of flags, etc., came to Rs. 11,330. There is a staff of four Leprosy Officers and thirteen trained assistants maintained jointly by the Board and the Leprosy Relief Association.

The Board carried out anti-malaria operations in three extremely malarious areas, resulting in a decline of malaria over these areas. The result of

a campaign in Toposi area has been limited in extent due to the presence of a large number of subsidences and abandoned pits and the restricted nature of the campaign itself.

During the year 1937, the Jharia Mines Board of Health held twelve ordinary, six special meetings and one joint meeting with the Jharia Water Board. The estimated population of the Settlement was 555,573 persons. The death-rate was 16·50 per thousand, as compared with 16·10 in the previous year. There were 27 cases of suspected cholera with 14 deaths, as compared with 64 cases with 39 deaths in the previous year. The number of deaths on collieries from cholera was 9, as compared with 14 in the previous year. The total number of anti-cholera inoculations performed was 2,900. During the year, there were 418 cases of suspected small-pox with 6 deaths, as compared with 3,733 cases with 329 deaths in the previous year. Eight hundred and eighty nine samples of food were analysed in the Board's laboratory and prosecutions were ordered in all cases of adulteration. With a view to improve the colliery housing the five years' housing programme enforced by the Board last year continued during the year. Subjects chosen for propaganda work were leprosy, maternity and child welfare, general hygiene and sanitation and ventilation in mines. As in previous years' all leprosy relief work continued to be managed by the Dhanbad and District Leprosy Relief Association which organised a leper day on the 17th April, 1937, and was successful in raising Rs. 14,750 on the occasion. The District Board, the Dhanbad Municipality and the Jharia Mines Board of Health continued their annual grants during the year. Dr. M. Wardman, Chief Leprosy Officer, joined her post on the 16th May 1937. The opening ceremony of the Leprosy Hospital at Tetulmuri was performed by His Excellency Sir Maurice Garnier Hallett, K. C. S. I., C. I. E., I. C. S., the Governor of Bihar, on the 24th October 1937.

During the year, 815 new patients were treated in the different clinics, the total number of treatments given being 28,711.

The Jharia Water Board continued to function throughout the year. The total quantity of water supplied to the Jharia coalfield during the year 1937 was about 475 million gallons as under :—

		Gallons.
1.	Collieries	391,280,000
2.	Non-colliery premises (domestic and non-domestic supply)	33,215,000
3.	Bazars	51,100,000
	Total .	475,595,000

Inspections Made by Medical Officers as ex-officio inspectors of Mines.

During the year many reports were received from provincial and district Medical Officers of Health concerning health and sanitation. All the reports were dealt with and most of the recommendations were carried out.

Statistics of Rainfall.

Statistics of rainfall in the eastern coalfields have been recorded as follows :—

	Rainfall in inches.	
	1937.	1936.
Jharia Coalfield—		
Jealgora	49·37	61·78
Topchanchi	56·18	69·80
Raniganj Coalfield—		
Asansol	56·53	59·84
Dishergarh	58·93	57·79
Giridih Coalfield—		
Giridih	60·75	77·37

Ambulance Work.

Classes in First-Aid were held at twenty-four centres in the Jharia coalfield and also in the mining areas of Singhbhum. Three hundred and eighty students attended these classes and 282 certificates were awarded. In the Raniganj coalfield similar classes were held at seven centres. One hundred and forty seven students attended these classes and 105 certificates were awarded. A St. John's Ambulance Shield was competed for among teams from various collieries in the Raniganj coalfield. The shield was won by Sitalpur No. 1 team (Messrs. Bengal Coal Company, Limited) the runners up being Samla No. 1 team (Messrs. Martin & Company). In addition to the above competition which is only open to persons holding the St. John's Ambulance Certificate, another competition was inaugurated during the year. This competition was for the Lang-Cunningham Memorial Shield. Persons not holding the St. John's Ambulance Certificate were allowed to compete, the object being to stimulate interest among the more illiterate workers.

I desire to express my appreciation of the valuable work done by lecturers and examiners during the year in the two major coalfields and in other mining districts.

Mining Boards in Bengal, Bihar and the Central Provinces.

The Bengal Mining Board held two meetings during the year. Among the subjects discussed at the meetings and by correspondence were :— (*a*) Temporary Regulations for coal mines ; (*b*) amendments to the Supplementary Coal Mines (Temporary) Regulations ; (*c*) Regulations for prohibiting the employment of women underground in mines ; (*d*) exemption of certain mines from the operation of the Indian Mines Act, 1923 ; (*e*) amendments in the Schedule to the Notification of the Government of India, in the Department of Industries and Labour, No. M-1051, dated the 1st October 1935, regarding exemption ; (*f*) postponment of the regulations for

prohibiting the employment of women underground in mines for a further period of three months; (*g*) amendments to the Indian Coal Mines Regulations, 1926, and the Indian Metalliferous Mines Regulations, 1926; (*h*) further amendments to the permanent Indian Coal Mines Regulations, 1926; (*i*) legislation to secure evacuation of inhabited buildings rendered dangerous by mining operations; (*j*) proposed amendment of the Coal Mines Regulations to introduce certification of shotfirers; (*k*) amendments to the Indian Coal mines Regulations, 1926, relating to control of first working and section working. The non-official members of the Board were Messrs. F. W. Manley, A. L. Ojha and Rai Sahib Upendra Nath Mondal.

The Bihar Mining Board for coal mines did not meet during the year. The subjects dealt with by correspondence were:—(*a*) Amendments to the Indian Coal Mines Regulations, 1926, and the Indian Metalliferous Mines Regulations, 1926; (*b*) further amendments to the permanent Indian Coal Mines Regulations, 1926; (*c*) proposed amendment of the Coal Mines Regulations to introduce certification of shot-firers; and (*d*) amendments to the Indian Coal Mines Regulations, 1926, relating to control of first working and section working. The non-official members of the Board were Messrs. D. M. Archibald, A. L. Ojha, Khetra Nath Sen Gupta and J. Mackie.

The non-official members of the Mining Board for mines other than coal mines were Messrs. G. A. Young, F. G. Percival, V. K. B. Pillai and J. W. Kendall.

The Central Provinces Mining Board held no meetings during the year. The subjects dealt with by correspondence were:—(*a*) amendments to the permanent Indian Coal Mines Regulations, 1926; (*b*) proposed amendments of the Coal Mines Regulations to introduce certification of shot-firers; and (*c*) amendments to the Indian Coal Mines Regulations, 1926, relating to control of first working and section working. The non-official members of the Board where Messrs. D. M. Nargolwalla, L. H. Bartlett, O.B.E., G. Llewelyn, Shamsher Bahadur Verma and Kunjilal Tulsiram Mehta.

Board of Examiners.

Five meetings of the Board of Examiners were held during the year. The non-official members of the Board were Messrs. J. Mackie, N. N. Sarkar and L. A. Jacobs for the first four meetings. Mr. Jas. E. Phelps was appointed a member of the Board for the last meeting, *vice* Mr. J. Mackie who had resigned. The local examiners appointed were Messrs. W. B. Penman and S. C. Ghosh for coal mine managers' first class certificates; Messrs. James Thomson and R. Hearn for coal mine managers' second class certificates and Mr. J. Mackay for the examination for coal mine surveyors' certificates. Mr. A. Young, Inspector of Mines (Offg.) was also an examiner and acted as Secretary for the coal mine managers' first and second class examinations; Mr. N. Barraclough was also an examiner and acted as Secretary for the coal mine surveyors' examination.

Ten first class certificates of competency to manage a coal mine were granted in lieu of British certificates of the same class. At the examinations for coal mine managers' certificates held at Dhanbad in February and March,

81 candidates sat for first class certificates and 56 for second class certificates. Seven certificates of the first class and twenty-two of the second class were granted. One duplicate surveyors' certificate of service was granted. At the examination for coal mine surveyors' certificates of competency held at Dhanbad in November, 35 candidates attended the examination— nine of them were successful.

Five hundred and eighty-one persons were examined for coal mine sirdars' certificates of competency and 458 certificates were granted. Out of 829 holders of sirdars' certificates examined in gas-testing, 540 were successful and their certificates were duly endorsed to that effect. 866 holders of sirdars' certificates appeared for re-examination in eyesight and hearing. 832 were successful and their certificates were duly endorsed. Under Coal Mines Regulation 49 the certificates of ten sirdars were suspended for periods varying from three to six months. During the year 29 duplicate sirdars' certificates and 80 duplicate discs were issued.

Mining Education.

At the Indian School of Mines, the number of students on the roll at the beginning of the session was 68, as compared with 59 at the beginning of the previous session. The results of the Diploma and Certificate examinations held in July 1937, were as follows :—

Diploma or Certificate.	No. of candidates.	No. of successful candidates.
Diploma of Associateship in Geology	3	2 (Class I).
		1 (Class II).
Diploma of Associateship in Mining Engineering . .	9	3 (Class I).
		6 (Class II).
Certificate in Geology	1	1
Certificate in Metal Mining	5	4
Certificate in Coal Mining	11	11

The mine surveying camp was pitched at Bhulanbararee colliery during the month of November 1937, and 48 students were in attendance. Visits and tours of inspection were paid to the mica mines of Kodarma, the copper and iron mines of Singhbhum and to many local collieries and places of geological interest. At the examinations held for coal mine managers' certificate held at Dhanbad in February, two former students obtained the first class colliery managers' certificate and five obtained the second class colliery managers' certificates. Two students obtained the surveyors' certificate of competency. In November 1937, the total number of students on the roll was 77.

In the Department of Mining and Metallurgy at the Benares Hindu University there were 95 students at the beginning of the session, as compared

with 80 at the beginning of the previous session. One student passed the final examination for the degree of B.Sc. in Mining and sixteen in Metallurgy. Up to date the total number of mining graduates is 29, and the total number of metallurgy graduates 59. Immediately after qualifying practically all the graduates found suitable employment. A mine surveying camp was arranged at Barakar in December and an underground survey conducted at Begunia colliery in the Raniganj coalfield. Tours of inspection were paid to mica mines at Kodarma, the copper mines at Mosaboni, and to a number of important collieries in the Raniganj and Jharia coalfields. At the examinations for coal mine managers' certificate held at Dhanbad in February, three former students were successful at the second class colliery managers' examination.

No advanced classes were held in the Raniganj coalfield during the year. Such classes, however, continued to be held under the auspices of the Government of Bihar at Jharia and Sijua in the Jharia coalfield. The total number of students attending the classes at these two centres was 79, as against 56 in the previous year. Eighteen of the third year students appeared at the final examinations and eight were successful. In both coalfields courses of lectures were delivered in the vernacular to overmen and sirdars in the Raniganj coalfield in Bengal and in the Jharia coalfield in Hindi. There were eight centres in the Raniganj coalfield and 147 enrolled for this course. In the Jharia coalfield there were six centres with an enrolment of 285. Classes in gas-testing were also held at Sitarampur and Jamuria in the Raniganj coalfield and at Jharia in the Jharia coalfield for the training of colliery sirdars and shot-firers in gas-tesing. The number of candidates enrolled for these classes in the Raniganj coalfield was 55 and in the Jharia coalfield 48. Special classes in mine surveying preparatory for the examination for mine surveycrs' certificates of competency were held at Sijua from the middle of August to November.

Scientific and Technical Associations.

(a) *Mining, Geological and Matallurgical Institute of India.*

During the year the name of the Mining and Geological Institute of India was changed to the Mining, Geological and Metallurgical Institute of India. The grading of membership was changed and the qualifications for nomination to the higher grades increased.

The total membership, including subscribers at the end of the financial year of the Institute, *i.e.*, on the 31st October 1937, was 406. In addition to the annual meeting, six ordinary general meetings and an extraordinary general meeting were held. Visits were made to Messrs. Jessop & Company, Limited's Engineering Works at Dum Dum, to the Bengal Coal Company, Limited's Dishergarh colliery in the Raniganj coalfield. Members also inspected the operations of Messrs. The Indian Copper Corporation, Limited's works at Mosaboni and the Santa Works of the Indian Standard Wagon Company, Limited, at Burnpur near Asansol, and visited the Matallurgical Laboratory of the Government of India Stores Department, and the Research Laboratory recently started by Messers. The Tata Iron and Steel Company, Limited. An Illustrated lantern lecture was delivered by Mr. J. B. Auden on his tour to the Karakoram.

Three issues of the Transactions were published. The Government of India prize was awarded to Mr. W. Gilbert for his paper entitled "Some Aspects of the Ceramic Industry"; the Institute gold medal to Mr. E. R. Gee for his paper, "The Economic Geology of the Northern Punjab, with notes on adjoining portions of the North-West Frontier Province"; the Institute silver medal to Mr. W. Gilbert for his above-mentioned paper; and two Institute bronze medals to Dr. J. Sanjana and Mr. R. A. MacGregor for their respective papers on "Phenomena within the plastic range of Coals" and "Deterioration of Steel under Service Stresses". The Pickering medal, presented by the Institute for the best student in mining at the Indian School of Mines, was awarded to Mr. I. S. Jain.

(b) *The Geological, Mining and Metallurgical Society of India.*

The total membership including subscribers at the close of session 1936-37 was 178. In addition to the annual general meeting, ten ordinary general meetings were held. Nine meetings were held in the Geological laboratory, Presidency College, Calcutta, and one meeting in the Indian School of Mines, Dhanbad. Fifteen original papers dealing with various aspects of geology were read and discussed. During the year parts 3 and 4 of Volume VIII and parts 1 and 2 of Volume IX of the Quarterly Journal of the Society and one bulletin on "Coal Conservation" were published. During the year seven excursions to the following places were arranged :— National Iron and Steel Company, Limited, (Howrah); Bata Shoe Factory, Batanagar; Bharat Glass Works, Belgharia; Pottery Works, Belgharia; Peat Beds, Belgharia; Hukumchand Electric Steel Works, Ballygunj, Calcutta; and Loyabad Colliery Rescue Station, Jharia coalfield.

(c) *The National Association of Colliery Managers (Indian Branch).*

The number of members of the National Association of Colliery Managers, Indian Branch, at the end of the year was 90. Some of the subjects dealt with by the Council during the year were :—(1) the questionnaire of the Coal Mining Committee. Mr. R. J. Pothecary and Mr. J. Brook, as representatives of this Association, were orally examined by the Coal Mining Committee; (2) examination of the Bihar Government Notification relating to the registration of work-persons; (3) proposed bye-laws promulgated under the Bengal Mining Settlement Act by the Asansol Mines Board of Health for the prevention and control of epidemic diseases; (4) representations to the Chief Inspector of Mines in India on the question of the stoppage of mine ventilating fans; (5) recommendation to the Government of India that all women should be excluded from the underground workings in mines; (6) deputation to the East Indian and Bengal Nagpur Railways with the object of bringing about closer co-operation between colliery and railway staffs in the working of colliery sidings. Mr. M. M. Mukherjee was joint representative of the National Association of Colliery Managers, Indian Branch, and the Indian Mine Managers' Association on the Asansol Mines Board of Health; Mr. R. J. Pothecary represented the Association on the Health and Baby Welfare Central Committee, Asansol. Mr. J. Curley represented the Association on the Asansol Leprosy Relief Committee; Mr. J. T. Caldwell represented the Association on the Dhanbad Cemetery Committee and Mr. V. C. Durham on the Mining Education Advisory Board.

(d) *The Indian Mine Managers Association.*

The membership of the Indian Mine Managers Association at the end of the year was 230. During the year the following subjects were dealt with :— (1) consideration of the amendments of the Workmen's Compensation Act; (2) active participation in the Safety First Association of India; (3) consideration of the recommendations of the Coal Mining Committee; (4) interviews with the Commissioner of the Chota Nagpur Division, regarding representation of the Association on all local bodies; (5) an interview with His Excellency the Governor of Bihar, regarding labour and other problems in the coal industry; (6) consideration of the amendment of the Indian Mines Act, 1923; (7) consideration of the draft bye-laws of the Asansol Mines Board of Health for the prevention and control of epidemic diseases; (8) consideration of the desirability of holding examinations twice a year for colliery managers' certificates; (9) the desirability of keeping in closer touch with the Owners' Association; and (10) the participation in public functions held in honour of high Government officials and in the opening ceremony of the Leprosy hospital. Some scientific papers on mining subjects were read during the year. Mr. B. K. Bose represented the Association on the Mines Board of Health for a part of the year, and on the Soft Coke Cess Research Committee; Mr. M. M. Mukherjee was the representative on the Asansol Mines Board of Health; Mr. S. C. Ghosh was the representative on the Asansol Health and Baby Welfare Society; Mr. N. Ghosh on the Asansol Leprosy Relief Association; Mr. J. K. Dholakia on the Mining Education Advisory Board and the Dhanbad Leprosy Relief Association and Mr. K. K. Baksi on the committee for the Society for the Prevention of Cruelty to animals and on the Motor Vehicles Advisory Committee. Mr. S. C. Ghosh acted as president and Mr. K. K. Baksi as Honorary Secretary of the Railways and Collieries Advisory Board for part of the year, when the Honorary Secretary's duties were assumed by the Honorary Secretary of the National Association of Colliery Managers (Indian Branch).

LABOUR ASSOCIATIONS.

(a) *The Indian Colliery Labour Union.*

This Union is registered under the Indian Trade Union Act, 1926, and has its headquarters at Jharia, Bihar. The total number of members on the roll is 8,521, chiefly miners and skilled and unskilled labourers and the clerical staff of collieries. The rates of subscription vary from three pies to four annas per month. The Union claims to have assisted workers in compensation claims and wage disputes. The Union has organised lantern lectures on welfare schemes including maternity and temperance.

(b) *The Tata's Collieries Labour Association.*

This Association is registered under the Indian Trade Union Act. Its activities are mainly concerned with workers employed at the Tata Iron and Steel Company, Limited's collieries in the Jharia coalfield. There are 3,123 members, mainly miners and skilled and unskilled labourers. The rates of subscription vary from three pies to Rs. 1-8-0 per month.

(c) *The Indian Miners Association.*

This Association is registered under the Indian Trade Union Act and has its head office at Jharia. This association is affiliated with the National Trades Union Federation, Bombay. The membership is given as over 4,000. The rates of subscription vary from one to four annas per month, according to the scale of pay. The association has conducted meetings and lantern lectures on sanitation, hygiene and temperance, etc. Assistance has also been rendered by the association in compensation claims and wage disputes.

Coal Mining Committee.

In my last report reference was made to the appointment of the Coal Mining Committee by the Government of India in their Resolution No. M-955, dated the 29th October 1936, and the terms of reference were given.

The report of the Committee was published in May 1937. It is of great value both as a comprehensive presentation of the conditions now obtaining in the coal mining industry in India and as furnishing a basis for the further consideration of the problems which these conditions create. The recommendations of the Committee were summarised in the final chapter of the report. The Government of India have already taken action on a number of these recommendations, while the more important proposals of the Committee relating to stowing in coal mines are engaging their attention.

Visitors to the Coalfields.

His Excellency Sir Maurice Hallett, K.C.S.I., C.I.E., I.C.S., visited the Jharia coalfield in October. Inspections of underground workings were made at East Ena and Kustore collieries. At East Ena His Excellency was received by Rao Bahadur D. D. Thacker, Managing Director. At Kustore an inspection of a portion of the underground workings and a visit to the hospital and workshops were arranged. A surface inspection was also made of the fire areas at the Kari Jore. During the course of His Excellency's stay in Jharia coalfield visits were also paid to the Charitable Hospital and the Indian School of Mines at Dhanbad. His Excellency formally opened Dr. G. C. Ghosh's Memorial Leprosy Hospital at Tetulmuri.

The Hon'ble Sir Muhammad Zafrullah Khan, Kt., Bar-at-Law, Railway and Commerce Member of the Government of India, paid a visit to the Kargali and Bokaro Joint Collieries.

Mr. Jagat Narain Lal, Parliamentary Secretary to the Revenue Minister, Bihar, visited the Jharia coalfield in November to make preliminary enquiries into labour conditions in mines. On 25th November he inspected the underground workings in a coal mine and on the 26th November he attended a meeting of representatives of owners and labour.

Official Duties, 1937.

Dr. D. Penman was Chief Inspector of Mines. He was on leave from 13th May to 12th November.

Mr. W. Kirby, Inspector, No. 1 Circle, was on leave up to 26th March and officiated as Chief Inspector of Mines from 13th May to 12th November.

Mr. G. S. Cameron, Inspector of Mines, held charge of No. 2 Circle throughout the year.

Mr. N. Barraclough, Inspector of Mines, was on deputation to the Coal Mining Committee up to the 10th April, and held charge of No. 1 Circle from 13th May to 12th November.

Mr. H. M. Mitra, Electric Inspector of Mines, was on leave from 14th June to 31st July.

Mr. N. G. Chatterjee, Junior Inspector of Mines, officiated as Inspector up to 26th March, *vice* Mr. Kirby granted leave.

Mr. H. K. Chatterjee, Junior Inspector of Mines, was on duty throughout the year.

Mr. A. Young, Junior Inspector of Mines, officiated as Inspector up to 5th April, *vice* Mr. N. Barraclough deputed to the Coal Mining Committee and was on leave from the 6th April to 21st October.

Mr. S. S. Grewal, Assistant Inspector of Mines, was promoted to be a Junior Inspector from 2nd March.

Mr. V. S. Chopra, Assistant Inspector of Mines, was on leave from the 23rd January to 6th February.

Mr. G. S. Jabbi was appointed to be an Assistant Inspector from the 5th March *vice* Mr. Grewal promoted to be Junior Inspector, and was on duty till the end of the year.

The number of coal mines worked during the year was 604, which is 100 more than in the previous year. The number of metalliferous (including stone, etc.) mines at work was 1,321 as compared with 1,469 in 1936.

During the year 1,230 mines were inspected, many of them being inspected several times. 3,246 separate inspections were made. The cause and circumstances of nearly all fatal accidents and serious accidents of importance, and all complaints of breaches of regulations and rules were investigated. Many inspections were made at the invitation of mine owners, Superintendents and Managers desirous of obtaining advice on safety matters. In the major coalfields a large proportion of the time of the Inspectors is occupied in investigating cases of actual or threatened damage to dwellings and roads by reason of the underground working of coal mines, in dealing with underground fires, and in examining protective works against the risk of inundation. In addition a large number of inspections of the sanitary conditions at mines were made by medical officers as *Ex-officio* Inspectors of Mines.

Orders were issued and withdrawn as follows :—

Section, Regulation or Rules.	Orders issued.	Orders withdrawn.
Under Section 19 (1)	22	4
Under Section 19 (2)	44	14
Under Section 19 (1A)	50	2

Exemptions, partial or complete, and permissions were granted and withdrawn as follows :—

Regulation.	Number of cases.	Number withdrawn.
Under Coal Mines Regulation 53	4	—
Under Coal Mines Regulation 76	2	—
Under Coal Mines Regulation 88	1	—
Under Coal Mines Regulation 116	1	1
Under Coal Mines Regulation 123	1	2
Under Coal Mines Regulation 136	1	—
Under Temporary Coal Mines Regulation 13 (1)	3	—
Under Supplementary Temporary Coal Mines Regulation 3.	3	—
Under Metalliferous Mines Regulation 74	1	—

Information was received of twelve outbreaks of fire underground, eight of which were new occurrences and four from old fire areas.

The number of original cases under the Land Acquisition (Mines) Act, 1885, at the end of 1937 stood at 735, thirteen of which were cases dealt with during the year. There were seventeen applications of modifications of restrictions and two complaints of violations of restrictions, all of which were dealt with. The Act applies to Bengal and Bihar and Orissa only. In other provinces where Government owns the minerals Local Governments were advised as to the restrictions necessary in cases where mine owners sought permission to work minerals beneath railways, villages, etc.

I have the honour to be,

Sir,

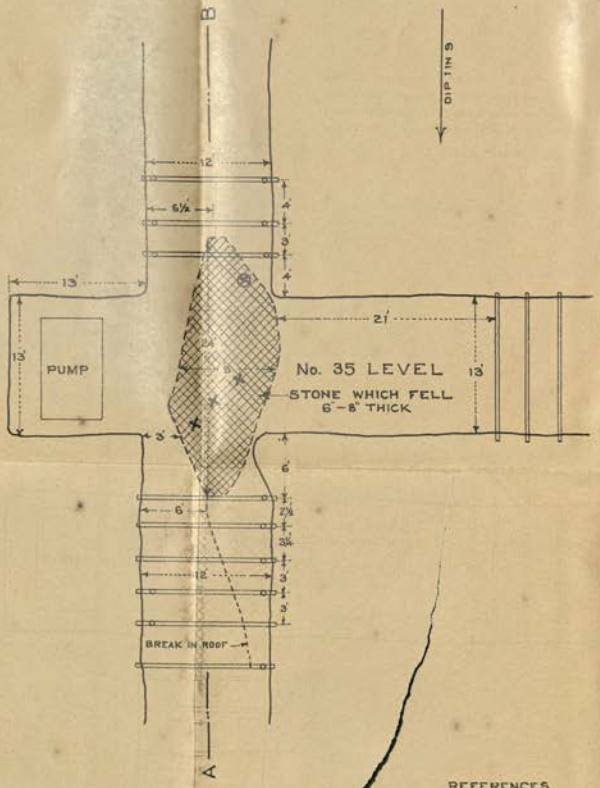
Your most obedient servant,

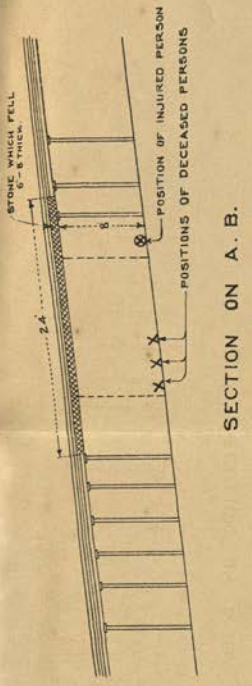
W. KIRBY,

Chief Inspector of Mines in India.

PLAN & SECTION ILLUSTRATING REPORT ON
FATAL ACCIDENT BY FALL OF ROOF
AT
THE BUDROOCHUCK COAL MINING Co. LTD'S. BUDROOCHUCK MINE

SCALE 1 INCH = 10 FT.





SECTION ON A. B.

REFERENCES

AREA OF ROOF WHICH FELL SHOWN THUS .....

POSITIONS OF DECEASED PERSONS " " ..... × × ×

POSITION OF INJURED PERSON " " .....

PROPS SHOWN THUS .....

Reg. No. 1466 E/37-1200.

Vandyked at the Survey of India Offices, Calcutta.

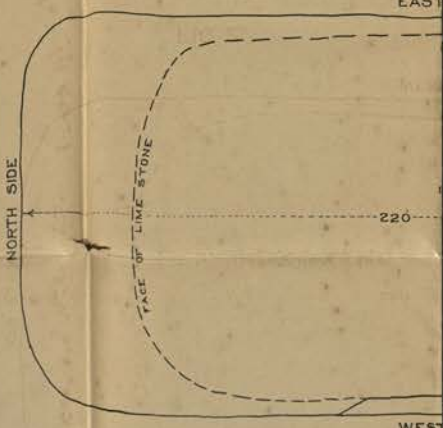
PLAN

FATAL

THE DYERS STONE

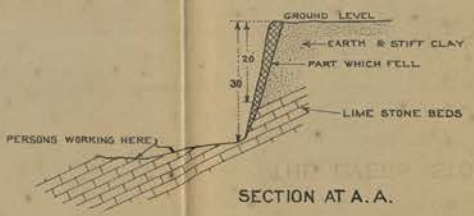
PLAN OF

EAST



WEST

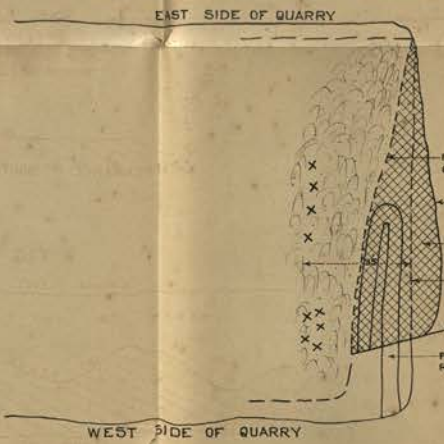
FIG. 2.



SECTION AT A.A.

FIG. 5.

PART PLAN OF QUARRY AFTER ACCIDENT



NOTE:-

XXX INDICATES APPROXIMATE POSITION OF PERSONS KIL

Rec. No. 1466 E/37-1200.

& SECTIONS ILLUSTRATING REPORT ON
ACCIDENT BY FALL OF SIDE
AT
LIME Co. LTD'S. SALAIYA PAHARHAI LIMESTONE MINE

SCALE 1 INCH = 20 FEET

F QUARRY

FIG. 1.

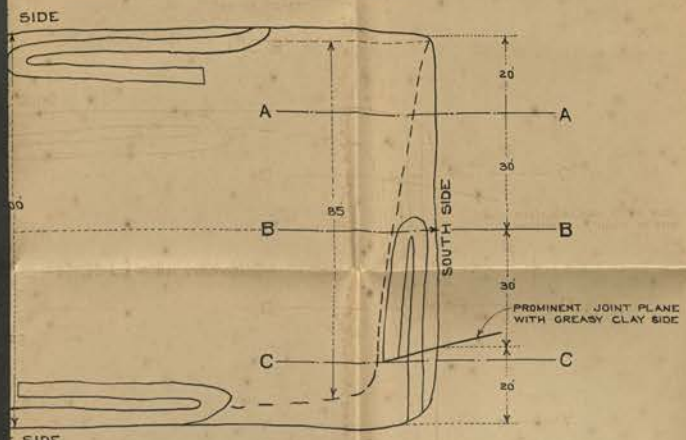
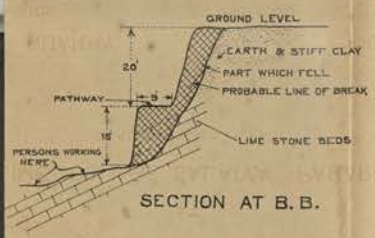


FIG. 3.



SECTION AT B. B.

FIG. 4.

SECTION AT C. C.
NO FALL AT THIS SECTION

FIG. 6

APPEARANCE OF SOUTH END OF QUARRY AFTER THE FALL

E STONE AT BOTTOM
BEFORE FALL.

F QUARRY FACE
IND LEVEL AFTER FALL

VHICH FELL

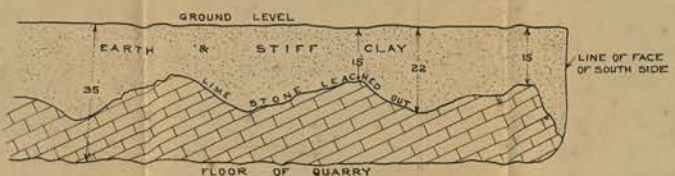
L LINE OF QUARRY FACE
UND LEVEL.

ENT JOINT PLANE
REASY CLAY SIDES

THWAY
AFTER FALL.

LED

FIG. 7.



VIEW OF PART OF EAST FACE OF QUARRY SHOWING SLOPE OF BEDS AND HOW SOME OF THE LIMESTONE HAD BEEN LEACHED OUT BY RUNNING WATER AFTER FORMATION AND THE SPACE FILLED WITH EARTH & CLAY.

VANDYKED AT THE SURVEY OF INDIA OFFICES, CALCUTTA.

APPENDIX I.

Statistics of Mines and Minerals.

Table No. 1.

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of Underground. Males. Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.
		Tons								
Assam	Khasi and Jaintia Hills	2,735	4	10	5	1	1	21	...	21
	Lakhimpur, Makum Coalfield	218,488	73	218	311	294	315	1,211	...	1,211
	Naga Hills, Nazira ,,	22,427	10	40	28	40	50	186	...	186
	Total	243,650	87	268	344	344	375	1,418	...	1,418
Baluchistan	Quetta-Pishin, Sor Range Coalfield.	4,362	7	40	54	1	...	108	...	108
	Sibi, Khost Coalfield	6,262	10	52	72	5	3	142	...	142
	Total	10,624	17	98	126	6	3	250	...	250
Bengal	Bankura Raniganj Coalfield	1,713	2	7	4	...	3	16	...	16
	Birbhum ,, ,,	2,054	1	11	14	1	2	29	...	29
	Burdwan ,, ,,	6,524,053	894	14,016	6,669	3,046	7,522	33,047	1,352	34,399
	Total	6,527,820	897	14,034	6,687	3,947	7,527	33,092	1,352	34,444
Bihar	Manbhum— Raniganj Coalfield (part of)	574,397	111	1,611	591	396	793	3,502	117	3,619
	Jharia ,,	9,479,775	1,272	15,831	10,870	5,021	8,064	41,058	1,752	42,810
	Hazaribagh— Jharia Coalfield (part of)	121,455	16	208	115	36	38	413	10	423
	Bokaro ,,	2,309,170	60	916	625	236	608	2,445	85	2,530
	Giridih ,,	674,794	146	2,943	656	198	632	4,575	148	4,723
	Karanpura ,,	519,162	24	449	223	153	217	1,066	45	1,111
	Ranchi— Karanpura Coalfield (part of)	15,166	3	34	28	11	12	88	3	91

DIX I,

AND MINERALS.

No. 1.

year 1937 at mines under the Indian Mines Act.

persons employed daily in and about the mines.

Open workings.								Total Underground and Open workings.	Surface.						Grand Total.
Males.						Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
A.L.															
...	...	...	...	...	...	...	...	21	3	1	5	9	10	19	40
1	3	5	6	...	15	8	23	1,234	46	167	181	394	147	541	1,775
...	...	...	...	...	...	...	...	186	12	36	42	90	...	90	276
1	3	5	6	...	15	8	23	1,441	61	204	228	493	157	650	2,091
...	...	...	...	...	...	...	...	108	...	...	...	...	...	...	108
...	...	...	...	...	...	...	...	142	1	2	8	11	...	11	153
...	...	...	...	...	...	...	...	250	1	2	8	11	...	11	261
2	7	...	...	3	12	4	16	32	2	9	1	12	...	12	44
...	...	...	...	...	...	...	...	29	2	2	2	6	3	9	38
15	118	17	22	134	306	122	428	34,827	1,524	3,242	6,862	11,628	4,540	16,168	50,995
17	125	17	22	137	318	126	444	34,888	1,528	3,253	6,865	11,646	4,543	16,189	51,077
11	146	30	42	112	341	189	530	4,149	200	419	560	1,179	613	1,792	5,941
127	1,665	504	272	1,317	3,885	1,808	5,693	48,503	2,000	4,536	11,281	17,817	6,883	24,700	73,203
7	42	...	20	24	93	45	138	561	58	67	188	313	128	441	1,002
49	2,599	854	204	895	4,600	2,110	6,710	9,240	353	523	1,329	2,105	365	2,470	11,710
1	4	...	2	6	13	3	16	4,739	98	146	706	950	476	1,426	6,165
1	346	78	238	448	1,111	307	1,418	2,529	65	202	375	642	149	791	3,320
1	5	3	1	1	11	2	13	104	6	10	32	48	22	70	174

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of Underground. Males. Overmen and Girdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.
		Tons								CO
Bihar—*contd.*	Santhal Parganas—									
	Jainty Coalfield . .	47,490	16	215	135	83	46	495	14	509
	Raniganj Coalfield (part of).	94,107	18	350	63	60	41	531	11	542
	Total .	13,535,516	1,666	22,557	13,305	6,194	10,451	54,173	2,185	56,358
Central Provinces.	Betul	5,657	2	20	11	5	10	48	1	49
	Chanda	264,269	42	847	501	122	316	1,828	78	1,906
	Chhindwara, Pench Valley Coalfield.	1,234,233	130	2,747	1,432	806	758	5,873	256	6,129
	Total .	1,504,159	174	3,614	1,944	933	1,084	7,749	335	8,084
Orissa . .	Sambalpur— Hingir Rampur Coalfield	47,127	4	81	103	18	32	238	...	238
Punjab .	Jhelum, Salt Range Coalfield	62,095	46	300	159	147	229	881	...	881
	Mianwali „ . .	98,740	27	167	161	32	163	550	...	550
	Shahpur „ .	5,797	3	36	...	3	16	58	...	58
	Total .	166,632	76	503	320	182	408	1,489	...	1,489
	Grand Total (Coal) for 1937	22,335,528	2,021	41,155	22,829	11,624	19,880	98,409	3,872	103,281
	Grand Total of preceding year.	20,583,982	2,516	45,438	22,608	10,368	17,573	98,503	7,269	105,772
	Difference .	+1,751,546	+405	—4,283	+221	+1,256	+2,307	— 94	— 3,397	—3,491

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

persons employed daily in and about the mines.

Open workings.								Total Underground and Open workings.	Surface.						Grand Total.
Males.						Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Overmen and Sirdars.	Coal-cutters.	Loaders.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
ALL—*contd.*															
...	...	...	...	...	...	...	...	509	23	74	106	203	29	232	741
1	17	0	3	11	38	4	42	584	23	43	128	194	47	241	835
197	4,824	1,475	732	7,814	15,092	4,468	14,560	70,918	2,730	6,017	14,705	23,451	8,712	32,163	103,081
1	...	...	1	18	20	...	20	69	18	9	23	50	8	58	127
1	2	4	...	...	7	...	7	1,913	59	69	325	453	120	573	2,486
4	78	19	17	152	270	216	486	6,615	176	813	1,094	2,083	607	2,690	9,305
6	80	23	18	170	297	216	513	8,597	253	891	1,442	2,586	735	3,321	11,918
...	...	...	...	...	...	...	...	238	...	24	26	50	34	84	322
3	2	7	...	3	15	...	15	896	63	81	234	378	...	378	1,274
3	3	...	...	4	10	...	10	560	55	42	340	437	16	453	1,013
...	...	...	...	...	...	...	...	58	10	5	39	54	...	54	112
6	5	7	...	7	25	...	25	1,514	128	128	613	869	16	885	2,399
227	5,037	1,527	823	3,128	10,747	4,818	15,565	117,846	4,707	10,519	23,887	39,106	14,197	53,303	171,149
131	2,859	1,248	591	2,055	6,884	1,948	8,832	114,604	3,972	9,473	22,711	36,156	12,157	48,313	162,917
+96	+2,178	+279	+237	+1,073	+3,863	+2,870	+6,733	+3,242	+735	+1,046	+1,176	+2,950	+2,040	+4,990	+8,232

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.
		Tons							IRON
Bihar	Singhbhum . .	1,587,362	...	...	...	...	...	...	...
	Total of preceding year.	1,401,530	...	...	...	...	...	...	...
	Difference . . .	+185,832	...	...	...	...	...	...	...
		Tons							MANGANESE
Bihar	Singhbhum . .	24,180	...	...	...	...	...	...	...
Bombay .	North Kanara .	18,723	...	...	...	...	...	...	...
	Panch Mahals	41,041	4	67	2	2	75	...	75
	Total .	59,764	4	67	2	2	75	...	75
Central Provinces	Balaghat . .	399,532	19	419	1	146	585	...	585
	Bhandara . .	153,230	...	...	...	...	...	...	...
	Chhindwara . .	1,048	...	...	...	...	...	...	...
	Nagpur . .	141,367	2	57	5	4	68	...	68
	Total .	695,177	21	476	6	150	653	...	653

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
ORE.														
222	3,537	474	1,439	5,692	2,366	8,058	8,058	220	626	1,342	2,188	660	2,848	10,906
161	3,016	397	1,171	4,745	2,008	6,753	6,753	175	1,352	2,931	4,458	1,806	6,264	13,017
+61	+541	+77	+268	+947	+358	+1,305	+1,305	+45	—726	—1,589	—2,270	—1,146	—3,416	—2,111
ORE.														
23	287	4	10	324	238	562	562	11	5	37	53	110	163	725
12	254	...	...	266	106	372	372	3	8	60	66	155	221	593
15	482	17	11	525	263	788	863	12	46	254	312	94	406	1,269
27	736	17	11	791	369	1,160	1,235	15	49	314	378	249	627	1,862
195	3,639	9	785	4,528	4,168	8,696	9,281	68	62	797	922	1,079	2,001	11,282
94	1,406	131	406	2,037	1,626	3,663	3,663	20	5	153	178	215	393	4,056
5	39	...	...	44	60	104	104	3	1	7	11	6	17	121
200	2,624	52	283	3,159	2,847	6,006	6,074	55	33	330	418	155	573	6,647
494	7,608	192	1,474	9,768	8,701	18,469	19,122	141	101	1,287	1,529	1,455	2,984	22,106

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons							MANGANESE
Madras	Bellary	450	...	...	...	...	...	...	...
	Kurnool	200	...	...	...	...	...	...	...
	Vizagapatam	20,509	...	...	...	...	...	...	...
	Total	21,159	...	...	...	...	...	...	...
	Grand Total (Manganese Ore) for 1937.	800,280	25	543	8	152	728	...	728
	Grand Total of preceding year.	624,830	22	433	...	167	622	...	622
	Difference	+175,450	+3	+110	+8	—15	+106	...	+106
		Oz.—Dwts.							GO
Bihar	Manbhum	26 6	1	3	1	...	5	...	5
	Singhbhum	...	1	...	...	3	4	...	4
	Total	26 6	2	3	1	3	9	...	9
	Total of preceding year.	1,376	1	2	1	1	5	...	5
	Difference	1,349·14	+1	+1	...	+2	+4	...	+4

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
ORE—*contd.*														
1	...	6	...	7	...	7	7	1	...	2	3	4	7	14
1	16	...	4	21	...	21	21	...	..	...	...	9	9	30
25	897	6	55	983	470	1,453	1,453	7	45	15	67	5	72	1,525
27	913	12	59	1,011	470	1,481	1,481	8	45	17	70	18	88	1,569
571	3,544	225	1,554	11,894	9,778	21,672	22,400	175	200	1,655	030	1,832	3,862	26,262
300	6,458	84	720	7,562	6,545	14,107	14,729	104	127	1,159	1,390	1,196	2,586	17,315
+271	+3,086	+141	+834	+4,332	+3,233	+7,565	+7,671	+71	—73	+496	+640	+636	+1,276	+8,947
LD.														
2	8	3	50	63	29	92	97	6	6	25	37	31	68	165
...	...	...	...	...	...	...	4	...	...	10	10	3	13	17
2	8	3	50	63	29	92	101	6	6	35	47	34	81	182
...	...	...	...	...	...	...	5	4	3	9	16	14	30	35
+2	+8	+3	+50	+63	+29	+92	+96	+2	+3	+26	+31	+20	+51	+147

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons						CHROMITE	
Baluchistan	Quetta Pishin	45	...	...	...	...	...	...	...
	Zhob	27,164	4	106	...	...	110	...	110
	Total	27,209	4	106	...	...	110	...	110
Bihar	Singhbhum	7,678	...	...	...	...	...	...	...
Bombay	Ratangiri	500	...	...	...	...	...	...	...
	Grand Total (Chromite Ore) for 1937.	35,387	4	106	...	...	110	...	110
	Grand Total of preceding year.	28,142	3	45	...	...	48	...	48
	Difference	+7,245	+1	+61	...	...	+62	...	+62
		Tons						COPPER	
Bihar	Singhbhum	371,458	9	443	...	1,165	1,617	...	1,617
	Total of preceding year.	357,194	3	417	...	1,102	1,522	...	1,522
	Difference	+14,264	+6	+26	...	+63	+95	...	+95

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
ORE.														
1	12	...	...	13	...	13	13	...	...	...	...	...	...	13
10	202	2	15	229	...	229	339	4	4	156	164	...	164	503
11	214	2	15	242	...	242	352	4	4	156	164	...	164	516
41	398	23	12	474	424	898	898	13	8	5	26	11	37	935
1	...	12	...	13	4	17	17	1	...	...	1	...	1	18
53	612	37	27	729	428	1,157	1,267	18	12	161	191	11	202	1,469
54	556	78	21	709	394	1,103	1,151	11	5	119	135	25	160	1,311
—1	+56	—41	+6	+20	+34	+54	+116	+7	+7	+42	+56	—14	+42	+158
ORE.														
...	...	...	...	...	...	...	1,617	52	303	838	1,193	402	1,595	3,212
...	...	...	...	...	...	...	1,522	39	248	679	966	390	1,356	2,878
...	...	...	...	...	...	...	+95	+13	+55	+159	+227	+12	+289	+334

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Cwt.							MI
Bihar	Bhagalpur	923	3	63	1	10	77	...	77
	Gaya	20,055	84	1,285	304	1,203	2,876	...	2,876
	Hazaribagh	61,108	768	6,818	1,252	2,735	11,573	...	11,573
	Manbhum	246	4	18	6	22	50	...	50
	Monghyr	3,646	31	224	53	194	502	...	502
	Total	85,978	890	8,408	1,616	4,164	15,078	...	15,078
Madras	Nellore*	15,647	55	570	562	406	1,593	...	1,593
	Nilgiris	121	2	18	2	10	32	...	32
	Total	15,786	57	588	564	416	1,625	...	1,625
Rajputana	Ajmer-Merwara*	1,895	14	183	12	72	281	...	281
	Grand Total (Mica) for 1937.	103,641	961	9,179	2,192	4,652	16,984	...	16,984
	Grand Total of preceding year.	86,504	779	9,053	1,575	4,443	15,850	...	15,850
	Difference	+17,137	+182	+126	+617	+209	+1,134	...	+1,134

* 28,868 cwt. of waste mica useful for

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
CA.														
6	37	...	53	96	41	137	214	7	...	...	7	2	9	223
14	411	74	204	703	29	732	3,608	195	310	73	578	85	663	4,271
194	2,139	182	570	3,085	149	3,234	14,807	575	757	636	1,968	406	2,374	17,181
20	26	16	49	111	51	162	212	12	4	28	44	10	54	266
33	241	73	219	566	69	635	1,137	58	183	27	268	127	395	1,532
267	2,854	345	1,095	4,561	339	4,900	19,978	847	1,254	764	2,865	630	3,495	23,473
29	202	278	334	843	757	1,600	3,193	132	279	304	715	987	1,702	4,895
...	...	...	...	...	...	...	32	...	9	6	15	1	16	48
29	202	278	334	843	757	1,600	3,225	132	288	310	730	988	1,718	4,943
30	345	19	7	401	42	443	724	17	66	23	106	17	123	847
326	3,401	642	1,436	5,805	1,138	6,943	28,027	996	1,608	1,097	3,701	1,635	5,336	29,263
214	2,222	560	835	3,631	804	4,435	20,485	779	1,398	860	3,037	1,574	4,611	25,096
+112	+1,179	+82	+601	+1,974	+334	+2,308	+3,442	+217	+210	+237	+664	+61	+725	+4,167

splitting was also raised.

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							SA
Punjab . .	Jhelum . .	123,197	29	415	45	149	638	6	644
	Mianwali . .	14,392	...	98	...	...	98	...	98
	Shahpur . .	26,224	5	81	12	37	135	9	144
	Grand Total (Salt) for 1937.	163,813	34	594	57	186	871	15	886
	Grand Total of preceding year.	151,523	34	600	56	206	896	32	928
	Difference . .	+12,290	...	—6	+1	—20	—25	—17	—42
		Tons.							MAGNE
Madras . .	Salem . . .	32,782	...	...	...	...	...	...	...
	Total of preceding year.	12,966	...	...	...	...	...	...	...
	Difference . .	+10,816	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
LT.														
1	...	11	...	12	...	12	656	1	83	236	320	...	320	976
...	...	...	...	...	...	...	98	...	...	68	...	...	68	166
...	...	...	...	...	...	1	144	1	9	57	67	...	67	211
1	...	11	...	12	...	13	898	2	92	361	387	...	455	1,353
1	10	...	225	236	...	236	1,164	1	77	147	157	1	226	1,390
...	—10	+11	—225	—224	...	—223	—266	+1	+22	+214	+230	—1	+229	—37
SITE.														
17	332	...	721	1,070	310	1,380	1,380	19	83	74	176	8	184	1,564
16	236	...	490	742	147	889	889	18	108	10	136	9	145	1,034
+1	+96	...	+231	+328	+163	+491	+491	+1	—25	+64	+40	—1	+39	+530

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							STEA
Bihar . .	Hazaribagh . .	468	...	...	...	...	...	...	...
	Singhbhum . .	82	...	...	...	...	...	...	...
	Total .	550	...	...	...	...	...	...	...
Central Provinces.	Jubbulpore .	1,858	2	5	2	25	34	...	34
Madras . .	Anantapur . .		1	...	3	2	6	...	6
	Nellore . . .		...	...	8	...	8	...	8
	Total .	40	1	...	11	2	14	...	14
United Provinces.	Hamirpur . .	106	...	15	2	...	17	...	17
	Grand Total (Steatite) for 1937.	2,554	3	20	15	27	65	...	65
	Grand Total of preceding year.	3,195	3	25	4	34	66	...	66
	Difference . .	−641	...	−5	+11	−7	−1	...	−1
		Tons.							SLA
Bihar . .	Monghyr . .	573	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other Skilled labour	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
TITE.														
1	7	9	18	35	18	53	53	1	...	...	1	...	1	54
2	4	...	...	6	6	12	12	2	..	24	26	36	62	74
3	11	9	18	41	24	65	65	3	...	24	27	36	63	128
1	15	...	31	47	56	103	137	1	...	17	18	30	48	185
...	...	...	...	...	...	...	6	...	...	...	...	2	2	8
...	...	...	...	...	...	...	8	...	...	...	...	...	...	8
...	...	...	...	...	...	...	14	...	...	...	...	2	2	16
...	...	30	2	32	...	32	49	...	36	5	41	...	41	90
4	26	39	51	120	80	200	265	4	36	46	86	68	154	419
5	33	55	76	174	78	252	318	3	51	21	75	8	83	401
—1	—12	—16	—25	—54	+2	—52	—53	+1	—15	+25	+11	+60	+71	+18
TE.														
4	63	18	28	113	5	118	118	...	...	...	...	...	...	118

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STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							SLA
Punjab . .	Gurgaon . .	1,915	...	...	...	...	...	...	...
	Kangra . . .	4,958	...	...	...	...	...	...	...
	Total .	6,873	...	...	...	...	...	...	...
	Grand Total (Slate) for 1937.	7,446	...	...	...	...	...	...	...
	Grand Total of preceding year.	7,055	...	...	...	...	...	...	...
	Difference . .	+391	...	...	...	...	...	...	...
		Tons.							LIME
Bihar . .	Shahabad . .	345,037	...	...	...	...	...	...	...
Central Provinces.	Bilaspur . .	91,210	...	...	...	...	...	...	...
	Jubbulpore . .	495,788	...	...	...	...	...	...	...
	Total .	586,998	...	...	...	...	...	...	...
Madras . .	Koimbatore .	126,434	...	...	...	...	..	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
TE—*contd.*														
11	31	33	25	100	...	100	100	1	...	2	3	...	3	103
53	111	76	122	362	...	362	362	7	2	2	11	...	11	373
64	142	109	147	462	...	462	462	8	2	4	14	...	14	476
68	205	127	175	575	5	580	580	8	2	4	14	...	14	594
70	172	136	163	541	7	548	548	1	...	2	3	...	3	551
—2	+33	—9	+12	+34	—2	+32	+32	+7	+2	+2	+11	...	+11	+43
STONE.														
108	559	128	597	1,392	365	1,757	1,757	198	167	321	686	124	810	2,567
15	142	272	31	460	192	652	652	8	55	34	97	92	189	841
100	337	125	1,176	1,738	2,076	3,814	3,814	25	33	177	235	23	258	4,072
115	479	397	1,207	2,198	2,268	4,466	4,466	33	88	211	332	115	447	4,913
2	...	...	162	164	...	164	164	...	...	161	161	—	161	325

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							LIME
Punjab	Attock	223,132	...	...	...	...	...	...	...
	Jhelum	8,677	...	...	...	...	...	...	...
	Mianwali	28,320	...	...	...	...	...	...	...
	Total	260,129	...	...	...	...	...	...	...
	Grand Total (Limestone) for 1937	1,318,598	...	...	...	...	...	...	...
	Grand Total of preceding year.	1,007,957	...	...	...	...	...	...	...
	Difference	+310,641	...	...	...	...	...	...	...
									STONE (CHIEFLY IGNEOUS
		Tons.							
Bengal	Birbhum	88,412	...	...	...	...	...	..	...
Bihar	Gaya	33,495	...	...	...	...	...	...	...
	Monghyr	37,055	...	...	...	...	...	...	...
	Sonthal Parganas	337,108	...	...	...	...	...	...	...
	Shahabad	48,579	...	...	...	...	...	...	...
	Singhbhum	32,555	...	...	...	...	..	...	...
	Total	488,792	...	...	...	...	...	...	...
Bombay	Bombay	163,218	...	...	...	...	...	...	...
	Bombay Suburban	18,900	...	...	...	...	...	...	...
	Kaira	20,850	...	...	...	...	...	...	...
	Surat	85,268	...	...	...	...	...	...	...
	Thana	22,316	...	...	..	...	...	...	...
	Total	310,602	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
STONE—*contd.*														
5	39	3	337	384	...	384	384	...	..	...	...	...	...	384
1	30	8	2	41	...	41	41	3	4	..	7	...	7	48
5	...	...	200	205	7	212	212	...	...	...	...	...	...	212
11	69	11	539	630	7	637	637	3	4	...	7	...	7	644
236	1,107	536	2,505	4,384	2,640	7,024	7,024	234	259	693	1,186	239	1,425	8,449
227	1,067	493	2,129	3,916	2,794	6,710	6,710	174	258	242	674	199	873	7,582
+ 9	+40	+43	+376	+468	—154	+314	+314	+60	+1	+451	+512	+40	+552	+866
ROCK)														
1	238	5	81	325	...	325	325	32	54	263	349	132	481	806
13	230	154	10	407	165	572	572	...	3	...	3	...	3	575
4	...	145	...	149	82	231	231	1	8	7	11	...	11	242
79	774	431	290	1,574	246	1,820	1,820	97	187	405	689	239	928	2,748
...	...	...	224	224	53	277	277	...	...	...	...	...	..	277
12	189	24	278	503	352	855	855	2	35	10	47	5	52	907
108	1,193	754	802	2,857	898	3,755	3,755	100	228	422	750	244	994	4,749
2	137	55	128	322	...	322	322	26	3	21	50	41	91	413
...	...	...	34	34	...	34	34	2	16	42	60	...	60	94
2	10	...	...	12	...	12	12	5	4	60	69	...	69	81
11	22	63	204	300	216	516	516	7	...	18	25	...	25	541
5	...	...	113	118	69	187	187	5	...	...	5	...	5	192
20	169	118	479	786	285	1,071	1,071	45	23	141	209	41	250	1,321

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.	STONE (CHIEFLY IGNEOUS						
Central Provinces.	Akola	7,732	...	...	...	...	...	...	...
	Nagpur	8,021	...	...	...	...	...	...	...
	Total	15,753	...	...	...	...	...	...	...
Madras	Chingleput	59,586	...	...	...	...	...	...	...
	East Godavari	9,305	...	...	...	...	...	...	...
	Guntur	53,370	...	...	...	...	...	...	...
	Kistna	7,199	...	...	...	...	...	...	...
	Total	129,460	...	...	...	...	...	...	...
Punjab	Jhelum	61,074	...	...	...	...	...	...	...
	Sheikhupura	8,449	...	...	...	...	...	...	...
	Total	69,523	...	...	...	...	...	...	...
Sindh	Sukkur	30,127	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
ROCK)—*contd.*														
...	...	3	50	53	35	88	88	1	...	...	1	...	1	89
2	...	...	100	102	100	202	202	1	...	...	1	...	1	203
2	...	3	150	155	135	290	290	2	...	...	2	...	2	292
...	...	449	22	471	338	809	809	19	...	82	101	55	156	965
...	...	62	...	62	16	78	78	...	...	...	...	...	...	78
27	...	123	47	197	17	214	214	...	2	13	15	5	20	234
...	100	...	...	100	...	100	100	5	...	50	55	10	65	165
27	100	634	69	830	371	1,201	1,201	24	2	145	171	70	241	1,442
5	68	...	106	179	7	186	186	3	5	16	24	...	24	210
6	23	7	26	62	...	62	62	2	6	26	34	...	34	96
11	91	7	132	241	7	248	248	5	11	42	58	...	58	6
9	64	38	...	111	22	133	133	1	...	1	2	...	2	135

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							STONE (CHIEFLY
United Provinces.	Allahabad	52,819	...	...	...	...	...	...	...
	Banda	2,150	...	...	...	...	...	...	...
	Jhansi	18,618	...	...	...	...	...	...	...
	Total	73,087	...	...	...	...	...	...	...
	Grand Total (Stone) for 1937.	1,205,756	...	...	...	...	...	...	...
	Grand Total of preceding year.	1,189,562	...	...	...	...	...	...	...
	Difference	+16,194	...	...	...	...	...	...	...
		Tons.							SAND
Bihar	Shahabad	39,414	...	...	...	...	...	...	...
	Total of preceding year.	33,734	...	...	...	...	...	...	...
	Difference	+5,680	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Surface.						
Males.							Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
IGNEOUS ROCK)—*concld.*														
17	4	70	370	461	155	616	616	10	...	...	11	..	11	627
...	...	3	12	15	11	26	26	...	...	1	1	...	1	27
9	182	...	...	191	20	211	211	6	38	47	91	57	148	359
26	186	73	382	667	186	853	853	16	39	48	103	57	160	1,013
204	2,041	1,632	2,095	5,972	1,904	7,876	7,876	225	337	1,062	1,644	544	2,188	10,064
123	1,276	1,290	1,281	6,970	1,302	8,272	8,272	207	549	1,082	1,838	524	2,362	10,634
+81	—2,235	+342	+814	—998	+602	—396	—396	+18	—192	—20	—194	+20	—174	—570
STONE.														
12	42	88	51	138	57	195	195	...	28	15	43	9	52	247
14	48	61	80	203	41	244	244	1	1	26	28	10	38	282
—2	—6	—23	—29	—65	+16	—49	—49	—1	+27	—11	+15	—1	+14	—35

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							GRA
Bihar . .	Singhbhum . .	13,936							Figures included
Bombay . .	Thana . . .	395							Figures included
Madras . .	Chingleput . .	25,603							Figures included
	Grand Total (Gravel) for 1937.	39,934							Figures included
	Grand Total of preceding year.	24,378	...	...	...	...	...	...	...
	Difference . .	+15,556	...	...	...	...	...	...	...
		Tons.							MU
Bombay . .	Bombay Suburban.	1,700							Figures included
	Thana . .	26,382							
	Total .	28,082							Figures included
United Provinces.	Jhansi . . .	2,383							Figures inclu ded
	Grand Total (Murum) for 1937.	30,465	...	...	...	...	...	...	...
	Grand Total of preceding year.	18,653	...	...	...	...	...	...	...
	Difference . .	+11,812	...	...	...	...	...	...	...
		Tons.							MUSCO
Rajputana .	Ajmer-Merwara .	7	...	...	...	...	...	...	...
	Total of preceding year.	21	...	...	...	...	...	...	...
	Difference .	—14	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
VEL.														
in those for Stone.														
in those for Stone.														
in those for Stone.														
in those for Stone.					...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
RUM														
in those for Stone.														
in those for Stone.														
in those for Stone.														
...	...	...	...	...	...	...	...	...	...	...	...	...	..	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VITE														
1	...	...	2	3	...	3	3	...	...	...	...	...	...	3
1	...	...	6	7	...	7	7	...	...	...	...	...	...	7
...	...	...	—4	—4	...	—4	—4	...	...	...	...	...	...	—4

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STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
									FIRE
Bengal . .	Burdwan .	Tons 7,946	...	...	...	...	...	...	...
Bihar .	Manbhum . .	4,280	...	...	...	...	...	...	...
Central Provinces.	Jubbulpore . .	21,106	...	...	...	...	...	...	...
		Tons.							
	Grand Total (Fireclay) for 1937.	33,332	...	...	...	...	...	...	...
	Grand Total of preceding year.	22,817	...	...	...	...	...	...	...
	Difference .	+10,515	...	...	...	...	...	...	...
		Tons.							CHINA
Bihar . .	Bhagalpur . .	1,227	4	15	...	39	58	...	58
	Singhbhum . .	6,180	...	...	...	...	...	...	...
	Total .	7,407	4	15	...	39	58	...	58
Delhi . .	Delhi . . .	3,538	2	31	9	6	48	...	48
Madras . .	Nellore . . .	79	...	...	...	...	...	...	...
	Grand Total(China Clay) for 1937.	11,024	6	46	9	45	106	...	106
	Grand Total of preceding year.	14,268	4	33	...	52	89	...	89
	Difference	—3,244	+2	+13	+9	—7	+17	...	+17

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
CLAY.														
2	60	8	...	70	38	108	108	3	...	20	23	15	38	146
1	33	23	10	67	18	85	85	...	...	...	...	...	...	85
6	5	...	149	160	152	312	312	3	...	26	29	...	29	341
9	98	31	159	297	208	505	505	6	...	46	52	15	67	572
6	4	...	145	155	156	311	311	3	...	26	29	2	31	342
+3	+94	+31	+14	+142	+52	+194	+194	+3	...	+20	+23	+13	+36	+230
CLAY.														
...	4	...	37	41	19	60	118	1	...	...	...	11	12	130
16	86	3	118	223	344	567	567	28	25	127	180	195	375	942
16	90	3	155	264	363	627	685	29	25	127	180	206	387	1,72
...	21	...	...	21	...	21	69	...	...	...	...	...	...	69
...	8	2	...	10	2	12	12	...	...	...	...	1	1	13
16	119	5	155	295	365	660	766	29	25	127	181	207	388	1,154
22	72	20	144	258	276	534	623	29	31	140	200	184	384	1,007
—6	+47	—15	+11	+37	+89	+126	+143	...	—6	—13	—19	+23	+4	+47

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STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							CL
Bengal . .	Burdwan . .	7,953	...	...	...	...	...	...	...
Punjab . .	Attock . . .	81,105	Figures included in those						
	Grand Total (Clay) for 1937.	89,058	...	...	...	...	...	...	...
	Grand Total of preceding year.	44,435	...	...	...	...	...	...	...
	Difference	+44,623	...	...	...	...	...	...	...
		Tons.							BARY
Madras . .	Cuddapah .	7,461	...	...	...	...	...	...	...
	Kurnool .	130	1	5	...	...	6	...	6
	Grand Total (Barytes) for 1937.	7,591	1	5	...	...	6	...	6
	Grand Total of preceding year.	1,252	1	4	...	...	5	...	5
	Difference	+6,339	...	+1	...	...	+1	...	+1

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.								Surface.						Grand Total.
Males.					Females.	Total Males and Females.	Total Underground and Open workings.	Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
AY.														
3	38	...	9	50	22	72	72	...	3	...	3	...	3	75
for Limestone.														
3	38	...	9	50	22	72	72	...	3	...	3	...	3	75
...	...	16	...	16	16	32	32	...	3	...	3	...	3	35
+3	+38	—16	+9	+34	+6	+40	+40	...	...	...	...	...	...	+40
TES.														
...	28	15	35	78	71	149	149	5	...	11	16	..	16	165
...	...	...	...	...	...	...	6	...	...	2	2	10	12	18
...	28	15	35	78	71	149	155	5	...	13	18	10	28	183
...	...	6	7	13	...	13	18	2	...	2	4	8	12	30
...	+28	+9	+28	+65	+71	+136	+137	+3	...	+11	+14	+2	+16	+153

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							APA
Madras . .	Trichinopoly . .	166						Figures included	
	Total of preceding year.	128	...	...	...	...	...	...	...
	Difference .	+38	...	...	...	...	...	...	...
		Cwt.							ASBES
Rajputana .	Ajmer-Merwara .	9	...	...	...	...	...	...	...
		Tons.							OCH
Central Provinces.	Chanda . .	63	1	4	...	...	5	...	5
	Jubbulpur . .	49	...	...	...	...		Figures included	
	Grand total (Ochre) for 1937.	112	1	4	...	...	5	...	5
	Grand total of preceding year.	70	...	7	...	...	7	...	7
	Difference .	+42	+1	—3	...	...	—2	...	—2
		Tons.							KAO
Central Provinces.	Jubbulpore . .	181	...	...	...	...	...	...	...
	Total of preceding year.	...	...	...	...	...	...	...	...
	Difference .	+181	...	...	...	...	...	...	...

DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.					Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
TITE.														
in those for gypsum.														
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	....	...	...	...	...	...	...	...	...	...	...
TOS.														
1	...	...	3	4	...	4	4	...	...	...	...	...	...	4
RE.														
...	3	...	...	3	...	3	8	...	...	3	3	4		15
in those for Kaoline.														
...	3	...	...	3	...	3	8	...	...	3	3	4	7	15
...	...	...	...	...	...	...	7	1	...	...	1	3	4	11
...	+3	...	...	+3	...	+3	+1	−1	...	+3	+2	+1	+3	+4
LINE.														
...	4	...	...	4	5	9	9	1	...	...	1	...	1	10
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	+4	...	...	+4	+5	+9	+9	+1	...	...	+1	...	+1	+10

APPEN

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons							
Bihar . .	Singhbhum . .	805	...	...	...	...	...	...	...
		Tons.							
Madras . .	Trichinopoly . .	1,597	...	...	...	....	...	...	...
Punjab . .	Jhelum . . .	12,335	Figures included in						
	Grand Total (Gypsum) for 1927.	13,932	...	...	...	...	...	...	...
	Grand Total of preceding year.	7,496	...	...	...	...	...	...	...
	Difference .	+6,436	...	...	...	...	...	...	...
		Tons.							
Bombay . .	Kaira	5,592	...	...	...	...	...	...	...
Central Provinces.	Jubbulpur	9,558	...	...	...	...	...	...	...
	Total .	15,150	...	...	...	...	...	...	...
		Tons.							
Rajputana .	Ajmer-Merwara .	27	...	...	...	...	...	...	...
	Total of preceding year.	99	1	...	12	...	13	...	13
	Difference .	—72	—1	...	—12	...	—13	...	—13

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DIX I—*contd.*

AND MINERALS—*contd.*

No. 1—*contd.*

year 1937 at mines under the Indian Mines Act—*contd.*

daily in and about the mines.

Open workings.							Total Underground and Open workings.	Surface.						Grand Total.
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.		Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	
NITE.														
3	...	...	52	55	62	117	117	1	...	20	21	...	21	138
SUM. ...	...	...	19	19	22	41	41	1	5	11	17	36	53	94
those for Salt.														
...	...	...	19	19	22	41	41	1	5	11	17	36	53	94
...	...	...	12	12	11	23	23	1	4	9	14	119	133	156
...	...	...	+7	+7	+11	+18	+18	...	+1	+2	+3	—83	—80	—62
XITE. 2	123	3	...	128	54	182	182	...	1	9	10	1	11	193
5	...	17	34	56	102	158	158	2	...	11	13	...	13	171
7	123	20	34	184	156	340	340	2	1	20	23	1	24	364
YL. 3	35	1	...	39	2	41	41	2	1	...	3	...	3	44
4	65	...	...	69	...	69	82	...	2	...	2	2	4	86
—1	—30	+1	...	—30	+2	—28	—41	+2	—1	...	+1	—2	—1	—42

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STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral field.	Total Output.	Average number of persons employed						
			Underground.						
			Males.					Females.	Total Males and Females.
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.		
		Tons.							FELS
Rajputana	Ajmer-Merwara	268	...	...	...	...	...	...	...
	Total of preceding year.	686	...	...	...	...	...	...	...
	Difference	—418	...	...	...	...	...	...	...
		Tons.							FULLERS
Central Provinces.	Jubbulpore	45						Figures included	
		Tons.							GRAPH
Madras	Vizagapatam	10	...	...	...	...	...	...	...
	Total of preceding year.	237	...	...	...	...	...	...	...
	Difference	—227	...	...	...	...	...	...	...
		Cwts.							TANTA
Bihar	Monghyr	11	2	4	2	2	10	...	10
	Grand Total (Metalliferous Mines) for 1937.	...	1,048	10,947	2,284	6,232	20,511	15	20,526
	Grand Total of preceding year.	...	966	13,192	2,344	8,418	24,920	32	24,952
	Difference	...	+82	—2,245	—60	—2,186	—4,409	—17	—4,426
	Grand Total (All Minerals) for 1937.	...	...	...	...	...	118,920	3,887	122,807
	Grand Total of preceding year.	...	...	...	...	...	123,423	7,301	130,724
	Difference	...	...	...	...	...	—4,503	—3,414	—7,917

DIX I—*contd.*

AND MINERALS—*concld.*

No. 1—*concld.*

year 1936 at mines under the Indian Mines Act—*concld.*

daily in and about the mines.

Open workings.								Surface.						
Males.								Males.						
Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Females.	Total Males and Females.	Total Underground and Open workings.	Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.	Females.	Total Males and Females.	Grand Total.
PAR														
3	10	...	12	25	...	25	25	...	1	...	1	...	1	26
4	...	9	14	27	...	27	27	1	...	...	1	...	1	26
—1	+10	—9	—2	—2	...	—2	—2	—1	+1	...	...	...	...	—2
EARTH. in those for Limestone.														
ITE														
...	...	...	2	2	5	7	7	...	...	2	2	5	7	14
...	16	2	8	26	1	27	27	...	...	...	...	...	...	27
...	—16	—2	—6	—24	+4	—20	—20	...	...	+2	+2	+5	+7	—13
LITE														
...	8	1	...	9	8	17	27	1	1	...	2	...	2	29
1,762	21,341	3,832	10,586	37,521	19,661	57,182	77,708	2,007	3,649	7,625	13,281	5,720	19,001	96,709
1,367	26,128	5,836	11,907	45,238	15,123	60,361	86,313	1,991	4,935	8,331	1,525	6,106	21,363	106,676
+395	—4,787	—2,004	—1,321	—7,717	+4,538	—3,179	—7,605	+16	—1,286	—706	—1,976	—386	—2,362	—9,967
...	...	...	...	48,268	24,479	72,747	195,554	...	...	...	52,387	19,917	72,304	267,858
...	...	...	...	52,122	17,171	69,193	199,917	...	...	...	51,413	18,263	69,676	269,593
...	...	...	...	—3,854	+7,308	+3,554	+4,363	...	...	...	+974	+1,654	+2,628	—1,735

APPEN

Table

Statement of total mining population in Coal Mines in British India

Name of Province.	Name of Coalfield or District.	Total number attending work.								
		Males.				Females.				Total Males and Females.
		Under-ground.	Open working	Surface.	Total.	Under-ground.	Open working.	Surface.	Total.	
		Tons.								
Assam	Khasi and Jaintia.	39	...	40	79	...	...	54	54	133
	Makum	1,385	13	405	1,803	...	13	109	122	1,925
	Nazira	301	...	169	470	...	...	...	...	470
	Total	1,725	13	614	2,352	...	13	163	176	2,528
Baluchistan	Sor Range	45	2	...	47	...	...	...	...	47
	Khost	142	4	8	154	...	...	...	...	154
	Total	187	6	8	201	...	...	...	...	201
Bengal	Raniganj	51,277	424	12,117	63,818	...	223	6,199	6,422	70,240
Bihar	Raniganj	6,648	456	1,980	9,084	...	341	1,075	1,416	10,500
	Jharia	68,619	5,731	23,111	97,461	...	3,893	10,646	14,539	112,000
	Bokaro	3,790	6,894	2,345	13,029	...	3,945	685	4,630	17,659
	Giridih	5,301	22	779	6,102	...	11	677	688	6,790
	Karanpura	1,946	1,871	994	4,811	...	542	310	852	5,663
	Jainty	318	...	116	434	...	...	17	17	451
	Total	86,622	14,974	29,325	130,921	...	8,732	13,410	22,142	153,063
Central Provinces.	Betul	80	...	62	142	...	...	17	17	159
	Wardha Valley	2,032	...	506	2,538	...	...	132	132	2,670
	Pench Valley	7,283	716	2,648	10,542	...	706	1,027	1,727	12,269
	Total	9,395	716	3,111	13,222	...	706	1,176	1,876	15,098
Orissa	Hingir Rampur	312	...	103	415	...	...	115	115	530
Punjab	Salt Range	1,984	46	1,185	3,165	...	...	22	22	3,187
	Grand Total	151,502	16,179	46,418	214,094	...	9,668	21,085	30,753	244,847

DIX I—*contd.*

No. 1-A.

on a day in the selected week in February 1938.

Total number prevented from attending.									
Males.				Females.				Total Males and Females.	Grand Total.
Under-ground.	Open working.	Surface.	Total.	Under-ground.	Open working.	Surface.	Total.		
13	...	25	38	...	...	18	18	56	189
963	11	42	1,016	...	12	55	67	1,083	3,008
85	...	42	127	...	...	...	...	127	597
1,061	11	109	1,181	...	12	73	85	1,266	3,794
...	...	...	...	...	...	...	...	...	47
...	...	...	...	...	...	...	...	...	154
...	...	...	...	...	...	...	...	...	201
4,465	12	816	5,293	...	10	656	666	5,959	76,199
802	30	84	916	...	21	53	74	990	11,490
2,450	87	535	3,072	...	63	287	350	3,422	115,422
193	1,264	289	1,746	...	701	28	729	2,475	20,134
3,990	8	136	4,134	...	5	103	108	4,242	11,032
1,238	519	43	1,800	...	180	4	184	1,984	7,647
13	...	3	16	...	...	...	...	16	467
8,686	1,908	1,090	11,684	...	970	475	1,445	13,129	166,192
10	...	...	10	...	...	...	...	10	169
75	...	10	85	...	...	6	6	91	2,761
896	39	141	1,076	...	26	59	85	1,161	13,430
981	39	151	1,171	...	26	65	91	1,262	16,360
3	...	2	5	...	...	...	...	5	535
88	...	15	103	...	...	...	...	103	3,290
15,284	1,970	2,188	19,437	...	1,018	1,269	2,287	21,724	266,571

APPEN

Table

Average hours worked per week in

Mineral Field.	Underground.					
	Overmen and Sirdars. — Foremen and Mates.	Miners.	Loaders.	Skilled Labour.	Unskilled Labour.	Females.
Jharia Coalfield (Bihar)	49	45	45	46	46	45
Raniganj ,, (Bengal)	50	46	46	48	47	45
Giridih ,, (Bihar)	42	42	40	46	46	44
Assam Coalfields	47	46	48	46	48	...
Punjab ,,	42	39	36	42	43	...
Baluchistan ,,	35	36	37	40	36	...
Pench Valley Coalfield (Central Provinces)	50	48	49	48	50	49
Bihar Mica	45	45	...	47	46	...
Madras Mica	47	47	...	47	47	...
Central Provinces Manganese	49	48	...	49	49	...
Central Provinces Limestone	...	...	...	...	...	...
Bihar Iron	...	...	...	...	...	...
Punjab Salt	38	43	...	43	41	23
Bihar China Clay	44	39	...	...	38	...
Punjab Slate	...	...	...	...	...	...

DIX I—*contd.*

No. 2.

each important mining field during the year 1937.

Open workings.						Surface.			
Overmen and Sirdars. — Foremen and Mates.	Miners.	Loaders.	Skilled Labour.	Unskilled Labour.	Females.	Clerical and Supervising Staff.	Skilled Labour.	Unskilled Labour.	Females.
49	47	46	47	48	46	52	50	50	49
47	45	44	47	46	45	52	50	50	49
48	45	...	48	...	30	49	47	44	48
45	45	45	...	...	45	48	50	50	48
43	44	40	...	48	...	53	46	46	48
...	...	...	...	...	...	36	42	44	...
52	52	51	52	52	51	53	52	52	51
44	44	...	45	44	40	47	47	49	47
48	46	...	46	46	47	46	48	46	46
48	46	...	47	44	45	48	47	43	43
50	49	...	49	50	47	49	50	49	47
49	49	...	49	49	49	50	50	50	50
54	54	...	...	...	...	51	46	47	...
46	47	...	45	46	46	46	46	46	43
40	40	...	41	41	...	48	48	48	...

APPEN

Table

Analysis of figures relating to

Province.	Coalfield.	Coal.					
		Opening stock.	Raisings.	Total.	Despatches.	Colliery consumption.	Coal delivered for coking.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Assam	Khasi & Jaintia Hills.	5,771	2,735	8,506	6,869	...	...
	Makum	...	218,488	218,488	204,100	11,860	2,528
	Nazira	444	22,427	22,871	22,260	591	...
Baluchistan	Baluchistan	230	10,624	10,854	10,336	.	...
Bengal (and part of Bihar).	Raniganj	278,067	7,196,324	7,469,391	6,795,024	461,148	60,665
Bihar	Jharia	434,875	9,601,230	10,036,105	7,748,284	528,489	1,195,397
	Bokaro	3,026	2,309,170	2,312,266	2,249,446	44,515	14,311
	Karanpura	5,462	534,328	539,790	506,636	15,588	...
	Giridih	143,512	674,794	818,306	728,553	29,607	...
	Jainty	7,433	47,490	54,923	45,764	5,448	...
Central Provinces.	Betul	235	5,657	5,892	3,815	1,020	...
	Pench Valley	14,129	1,234,233	1,248,362	1,164,519	71,253	...
	Wardha Valley	5,058	264,269	269,327	253,730	14,920	...
Orissa	Hingir-Rampur	1,026	47,127	48,153	40,944	4,936	...
Punjab	Salt Range	2,385	166,632	169,017	162,254	3,418	...
	Total 1937	896,723	22,835,528	23,232,251	19,942,554	1,192,793	1,272,901

DIX I—*contd.*

No. 3.

the output of Coal and Coke, 1937.

Coal despatched to coke factories.	Closing stocks.	Coke.									
		Opening stocks.		Coke made.		Despatches.		Colliery consumption.		Closing stocks.	
		Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
...	1,637	...	...	528	...	449	...	79	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...
...	518	...	...	...	...	...	...	...	...	...	...
...	152,554	92	287	2,801	40,666	2,744	39,743	...	327	149	883
1,848,521	563,953	3,912	10,214	88,564	791,666	88,140	786,126	435	2,368	3,901	13,386
6,308	3,994	36	119	3,546	4,813	3,502	4,915	39	11	41	6
...	17,566	...	...	...	...	...	...	...	...	...	...
73,923	60,146	...	...	...	...	...	...	...	...	...	...
...	3,711	...	...	...	...	...	...	...	...	...	...
...	1,057	...	...	...	...	...	...	...	...	...	...
...	12,590	16	...	...	...	...	...	...	...	16	...
...	677	...	...	...	...	...	...	...	...	...	...
...	2,273	...	...	...	...	...	...	...	...	...	...
...	3,345	...	...	...	...	...	...	...	...	...	...
1,928,752	824,021	4,056	10,620	95,439	837,145	94,835	830,784	553	2,706	4,107	14,275

APPENDIX I—*contd.*

Table No. 4.

Numbers of mines opened, closed and inspected, during the year 1937.

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
				COAL.				
Assam	Khasi and Jaintia Hills	1	...	1	...	...	1	1
	Lakhimpur—Makum Coalfield	4	4	...	...	...	3	6
	Naga Hills—Nazira Coalfield	1	...	1	...	...	2	2
Baluchistan	Baluchistan Coalfield	17	...	17	8	6	10	15
Bengal (and part of Bihar).	Raniganj Coalfield	226	156	70	43	15	234	959
Bihar	Jharia Coalfield	254	167	87	71	15	270	1,418
	Bokaro Coalfield	8	5	3	2	3	5	20
	Karanpura Coalfield	6	4	2	1	1	6	7
	Giridih Coalfield	4	3	1	...	...	6	15
	Jainty Coalfield	7	1	6	...	...	8	13
Central Provinces.	Betul	2	1	1	...	1	3	2
	Pench Valley Coalfield	26	20	6	3	...	23	56
	Wardha Valley	7	6	1	...	1	7	15
Orissa	Hingir-Rampur Coalfield	1	1	...	...	...	1	3

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
			COAL—*contd.*					
Punjab	Salt Range Coalfield	40	...	40	18	13	25	34
	Grand Total (Coal) for 1937	604	368	236	146	55	604	2,566
	Grand Total of preceding year.	594	355	149	65	54	536	2,784
	Difference	+10	+13	+87	+81	+1	+68	−218
			IRON ORE.					
Bihar	Singhbhum	5	...	5	1	...	3	8
	Grand Total (Iron Ore) for 1937	5	...	5	1	...	3	8
	Grand Total of preceding year.	7	...	7	...	...	7	8
	Difference	−2	...	−2	+1	...	−4	...
			MANGANESE ORE.					
Bihar	Singhbhum	14	...	14	3	...	12	13
Bombay	North Kanara	3	...	3	3	1	...	...
	Panch Mahals	2	2	...	...	...	2	3

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
			MANGANESE ORE—*contd.*					
Central Provinces.	...	67	3	64	37	3	36	36
Madras	...	12	1	11	3	2	6	6
	Grand Total (Manganese Ore) for 1937.	98	6	92	46	6	56	58
	Grand Total of preceding year.	63	5	58	28	7	39	40
	Difference	+35	+1	+34	+23	—1	+17	+18
			GOLD.					
Bihar	...	3	...	3	1	1	1	2
	Total of preceding year	3	...	3	1	1	1	1
	Difference	...	...	...	...	...	...	+1
			CHROMITE ORE.					
Baluchistan	...	39	...	39	1	...	9	9
Bihar	...	13	...	13	3	...	10	10
Bombay	...	1	...	1	...	...	...	...
	Grand Total (Chromite Ore) for 1937.	53	...	53	4	...	19	19
	Grand Total of preceding year	49	...	49	...	...	9	9
	Difference	+4	...	+4	+4	...	+10	+10

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Provinces.	District and mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
			COPPER ORE.					
Bihar	Singhbhum	5	...	5	2	...	2	6
	Total of preceding year	3	2	1	1	...	1	6
	Difference	+2	—2	+4	+1	...	+1	...
			MICA.					
Bihar	...	770	34	736	386	277	158	168
Madras	...	103	13	90	45	23	72	72
Rajputana		36	...	36	20	24	14	14
	Grand Total (Mica) for 1937	909	47	862	451	324	244	254
	Grand Total of preceding year	699	40	659	305	234	134	145
	Difference	+210	+7	+203	+146	+90	+110	+109
			SALT.					
Punjab	...	3	1	2	...	...	3	8
	Total of preceding year	3	2	1	...	...	2	2
	Difference	...	—1	+1	...	...	+1	+

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
				MAGNESITE.				
Madras . .	Salem	3	...	3	...	1	2	3
	Total of preceding year .	3	...	3	...	...	1	1
	Difference .	...	...	...	...	+1	+1	+2
				STEATITE.				
Bihar	... .	4	...	4	1	...	2	3
Central Provinces.	... .	3	...	3	1	...	4	4
Madras . .	... .	2	...	2	...	1	1	1
United Provinces.	... .	14	...	14	8	8	17	17
	Grand Total (Steatite) for 1937	23	...	23	10	9	24	25
	Grand Total of preceding year	25	...	25	12	10	10	11
	Difference	—2	...	—2	—2	—1	+14	+14

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections
					SLATE.			
Bihar	Monghyr	5	...	5	1	2	7	7
Punjab . .	... .	14	...	14	2	1	13	13
	Grand Total (Slate) for 1937 .	19	...	19	3	3	20	20
	Grand Total of preceding year .	21	...	21	7	5	11	11
	Difference .	—2	...	- 2	—4	—2	+9	+9
					LIMESTONE.			
Bihar	... .	14	...	14	2	1	15	18
Central Provinces.	... .	19	2	17	4	4	17	19
Madras . .	... .	1	...	1	...	...	1	1
Punjab . .	... .	3	1	2	...	...	4	4
Sind . .	... .	...	...	...	...	...	1	1
	Grand Total (Limestone) for 1937.	37	3	34	6	5	38	43
	Grand Total of preceding year	47	3	44	11	6	32	35
	Difference .	—10	...	—10	—5	—1	+6	+8

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
		STONE.						
Bengal	...	3	....	3	...	....	4	4
Bihar	...	53	...	53	8	4	62	68
Bombay	...	21	2	19	5	4	32	32
Central Provinces.	...	2	...	2	...	...	...	...
Delhi	Delhi	...	...	...	...	...	1	2
Madras	...	11	1	10	6	1	14	14
Punjab	...	4	...	4	...	...	10	10
Sindh	...	1	...	1	...	...	2	2
United Provinces.	...	13	...	13	2	1	34	39
	Grand Total (Stone) for 1937	108	3	105	21	10	159	171
	Grand Total of preceding year	104	3	101	9	11	138	144
	Difference	+4	...	+4	+12	—1	+21	+27

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
			SANDSTONE.					
Bihar	Shahabad	2	...	2	...	...	6	6
United Provinces.	...	...	...	...	...	...	2	2
	Grand Total (Sandstone) for 1937.	2	...	2	...	...	8	8
	Grand Total of preceding year.	3	...	3	...	...	7	7
	Difference	−1	...	−1	...	...	+1	+1
			FIRE CLAY.					
Bengal	...	2	...	2	1	...	2	2
Bihar	...	5	...	5	...	...	7	9
Central Provinces.	...	3	2	1	...	...	1	1
Orissa	...	...	...	...	...	...	1	1
	Grand Total (Fire Clay) for 1937	10	2	8	1	...	11	13
	Grand Total of preceding year.	4	2	2	...	...	21	24
	Difference	+6	.	+6	+1	...	−10	−11

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
					CHINA CLAY.			
Bihar	...	9	...	9	3	2	8	10
Delhi	...	5	.	5	4	4	9	13
Madras	...	1	...	1	1	...	...	...
	Grand Total (China Clay) for 1937.	15	...	15	8	6	17	23
	Grand Total of preceding year	14	...	14	6	5	9	9
	Difference	+1	...	+1	+2	+1	+8	+14
					CLAY.			
Bengal	Burdwan	3	1	2	1	1	4	4
	Total of preceding year	1	1		...	...	3	5
	Difference	+2	...	+2	+1	+1	+1	—1

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1936—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines: Worked under mechanical power.	Number of mines: Not worked by mechanical power.	Number of mines: Opened during the year.	Number of mines: Closed during the year.	Inspections: Number of mines inspected.	Inspections: Number of inspections.
					BARYTES.			
Madras	...	5	...	5	2	...	5	5
	Total of preceding year	2	...	2	...	..	4	4
	Difference	+3	...	+3	+2	...	+1	+1
					ASBESTOS			
Rajputana	...	1	...	1	1	...	...	...
	Total of preceding year	...	...	...	...	...	...	...
	Difference	+1	...	+1	+1	...	...	...
					OCHRE.			
Central Provinces.	...	1	...	1	1	...	...	...
	Total of preceding year	1	...	1	...	1	1	1
	Difference	...	...	...	+1	−1	−1	−1
					KAOLINE.			
Central Provinces.	...	1	...	1	...	...	...	...
	Total of preceding year	1	...	1	...	...	...	...
	Difference	...	...	...	...	...	...	...

APPENDIX I—*contd.*

Table No. 4—*contd.*

Numbers of mines opened, closed and inspected, during the year 1937—*contd.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of Mines.				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
				GYPSUM.				
Madras . .	... .	4	...	4	1	1	...	...
	Total of preceding year . .	4	...	4	...	1	3	4
	Difference .	...	...	...	+1	...	+3	+4
				BERYL.				
Rajputana .	... .	3	...	3	1	1	2	2
	Total of preceding year . .	8	...	8	7	4	2	2
	Difference .	—5	...	—5	—6	—3	...	...
				GRAPHITE.				
Madras .	... .	1	...	1	...	...	...	...
Central Provinces.	... .	...	...	...	...	...	1	1
	Grand Total (Graphite) for 1937	1	...	1	...	..	1	1
	Total of preceding year . .	2	...	2	...	...	1	1
	Difference .	—1	...	—1	...	...	...	...
				BAUXITE.				
Bombay . .	... .	1	...	1	1	...	1	1
Central Provinces.	.. . . . .	2	...	2	...	...	4	4
	Grand Total of (Bauxite) for 1937	3	...	3	1	...	5	5
	Total of preceding year .	...	...	...	...	...	3	3
	Difference .	+3	...	+3	+1	...	+2	+2

APPENDIX I—*contd.*

Table No. 4—*concld.*

Numbers of mines opened, closed and inspected, during the year 1937—*concld.*

Province.	District and Mineral field.	Number of mines under the scope of the Act.	Number of mines				Inspections.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
				FELSPAR.				
Rajputana	...	3	...	3	1	1	2	2
	Total of preceding year	5	...	5	...	3	3	3
	Difference	—2	...	—2	+1	—2	—1	—1
				MUSCOVITE.				
Rajputana	...	1	...	1	...	1	...	...
	Total of preceding year	1	...	1	1	...	...	...
	Difference	...	...	...	—1	+1	...	...
				KYANITE.				
Bihar	...	1	...	1	1	...	...	...
	Total of preceding year	...	...	...	...	...	...	...
	Difference	+1	...	+1	+1	...	...	...
				TANTALITE.				
Bihar	...	1	...	1	...	1	...	...
	Total of preceding year	1	...	1	1	...	...	...
	Difference	...	...	...	—1	+1	...	...
	Grand Total (Metalliferous Mines) for 1937.	1,321	63	1,258	564	371	626	680
	Grand Total of preceding year	1,469	79	1,390	497	359	535	584
	Difference	—148	—16	—132	+67	+12	+91	+96
	Grand Total (All Minerals) for 1937.	1,925	431	1,494	710	426	1,230	3,246
	Grand Total of preceding year	1,973	434	1,539	562	413	1,071	3,378
	Difference	—48	—3	—45	+148	+13	+159	—132

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APPENDIX I—*contd.*

Table No. 5.

The following table shows the fluctuations in the output of the principal minerals raised from mines classed under the Indian Mines Act. The other minerals raised are apatite, asbestos, barytes, bauxite, beryl, chinaclay, clay, felsper, fireclay, fuller's earth, graphite, gypsum, kyanite, magnesite, muscovite, ochre, stone, slate, steatite and tantalite.

Year.	Coal.	Manganese ore.	Mica.	Limestone.	Salt.	Gold.	Copper ore.	Wolfram ore.	Iron ore.	Chromite ore.	Tin ore.	Lead ore.	Silver.
	Tons.	Tons.	Cwts.	Tons.	Tons.	Troy ozs.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Troy ozs.
1928	21,515,796	716,626	44,629	1,404,578	145,543	7	18,055	622	1,206,754	17,167	2,777	443,654	7,404,728
1929	22,308,174	750,908	49,437	1,313,647	148,496	30	76,831	1,061	1,436,385	21,054	3,384	464,561	7,280,517
1930	22,683,861	623,678	52,519	1,143,312	147,270	30	123,749	1,509	1,132,803	30,488	3,001	530,119	7,054,206
1931	20,514,597	347,373	46,177	862,226	134,916	..	153,636	969	590,176	14,938	2,552	397,679	5,000,400
1932	18,719,587	88,119	32,643	725,378	150,286	50	175,375	848	673,434	7,866	2,957	372,556	5,998,956
1933	18,160,681	53,240	41,005	1,120,110	145,838	267	201,722	836	653,239	9,770	3,209	454,791	6,054,069
1934	20,243,977	221,282	55,555	940,860	154,955	858	328,676	1,333	834,477	9,356	3,800	443,489	5,792,033
1935	21,014,469	422,847	58,553	1,000,308	150,515	1,255	350,801	2,549	1,179,050	19,039	4,383	460,886	5,825,929
1936	20,583,982	624,830	82,077	1,007,057	151,523	1,376	357,194	3,140	1,401,530	28,142	4,664	468,842	5,052,000
1937	22,335,528	800,280	94,811	1,318,598	163,813	26	371,458	...*	1,587,362	35,387	...*	...*	...

* The production in previous year was from Burma.

Table No. 6.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1928-1937 in respect of coal mines under the Indian Mines Act :—

Year.	Amount of coal raised.	Average number of persons working daily below and above ground.	Number of deaths below and above ground.	Death-rates.	
				Per 1,000,000 tons raised.	Per 1,000 persons working daily below and above ground.
1928 . . .	21,515,796	164,139	218	10·13	1·33
1929	22,308,174	165,658	194	8·70	1·17
1930	22,683,861	169,001	211	·30	1·25
1931	20,514,597	158,267	185	9·02	1·17
1932	18,719,587	148,489	151	8·07	1·02
1933	18,160,681	144,707	124	6·83	0·86
1934	20,243,977	151,375	157	7·76	1·04
1935	21,014,469	159,254	264	12·56	1·66
1936	20,583,982	162,917	420	20·40	2·58
1937	22,335,528	171,149	200	8·95	1·17

APPENDIX I—*contd.*

Table No. 7.

Aggregate horse power and purpose for use of electric motors installed both on surface and underground at Coal Mines under the Indian Mines Act.

Coalfield.	Horse power on surface.						Horse power below ground.					Total horse power of motors installed.
	Winding.	Ventilation.	Haulage.	Coal washing or screening.	Miscellaneous.	Total.	Haulage.	Pumping.	Portable machinery.	Miscellaneous.	Total.	
Assam	...	117	125	7	186	435	180	...	...	...	180	615
Bokaro	200	195	520	85	1,161	2,161	290	707	55	...	1,052	3,213
Central Provinces	...	85	100	...	63	248	296	786	315	30	1,427	1,675
Giridih	165	388	...	270	448	1,271	779	4,208	107	2	5,096	6,367
Jharia	2,773	1,252	2,345	1,186	1,685	9,241	7,807	21,873	3,692	1,954	35,326	44,567
Karanpura	...	75	750	95	344	1,264	...	453	107	...	560	1,824
Punjab	...	...	25	...	...	25	...	...	...	...	...	25
Raniganj	2,295	1,435	550	1,028	887	6,195	7,189	11,670	3,127	337	22,323	28,518
Total	5,433	3,547	4,415	2,671	4,774	20,840	16,541	39,697	7,403	2,323	65,964	86,804

Table No. 8.

Number of Mines under the Indian Mines Act, where electric power is used, and the aggregate horse power of electric motors installed.

Province.	Minerals worked.				Total horse power of motors installed.
	Coal.		Sundry Minerals.		
	Number of mines.	Horse power.	Number of mines.	Horse power.	
Assam	2	615	...	...	615
Bengal	43	24,480	1	58	24,538
Bihar	69	60,009	6	4,051	64,060
Bombay	...	...	1	166	166
Central Provinces	9	1,675	7	560	2,235
Madras	...	...	3	441	441
Punjab	1	25	2	1,970	1,995
Total	124	86,804	20	7,246	94,050

APPENDIX I—*contd.*

Table No. 9.

Number and type of coal-cutting machines at work in Coal Mines under the Indian Mines Act.

Name of machine.	Chain.	Bar.	Percussive.	Power.		Total number of machines.
				A. C.	D. C.	
Diamond	1	...	...	1	...	1
Goodman	65	...	...	45	20	65
Hardy	...	..	6	6	...	6
Mavor and Coulson	26	29	...	57	1	58
Sullivan	10	...	...	10	...	10
Total	105	29	6	119	21	140

Jharia coalfield	46 machines	Total number of square feet undercut—6,890,160.
Raniganj coalfield	78 ,,	
Giridih coalfield	1 machine	
Karanpura coalfield	5 machines	
Bokaro coalfield	1 machine	
Central Provinces coalfield	9 machines	

Table No. 10.

Number of mechanical ventilators in use at Coal Mines under the Indian Mines Act in 1937.

Assam.	Baluchistan.	Bengal.	Bihar.	Central Provinces.	Orissa.	Punjab.	Total.
9	...	33	64	9	...	2	117

APPENDIX I—*concld.*

Table No. 11.

Safety lamps in use at Coal Mines under the Indian Mines Act.

Name of manufacturer.	Number in use in							
	Assam.	Baluchistan.	Bengal.	Bihar.	Central Provinces.	Orissa.	Punjab.	Total.
Electric.								
Ceag	320	...	...	1,629	...	...	..	1,949
Oldham	...	...	...	...	...	...	...	...
Concordia	...	...	1,175	502	...	...	...	1,677
Flame type.								
Davies	389	...	4,878	3,139	5	...	6	8,417
Hailwood	1,069	...	2,355	11,796	...	...	...	15,200
Naylor	...	...	4	234	...	...	...	238
Patterson	...	...	269	1,386	...	...	..	1,655
Premier	...	...	27	968	...	...	.	995
Thomas Williams	...	...	7,735	5,076	...	...	...	12,811
Wolfe	...	6	...	...	...	...	.	6
Total	1,778	6	16,423	24,730	5	...	6	42,948

9,731 were locked by lead rivets and 33,217 by magnetic means.

Table No. 12.

Statement of explosives used during the year 1937 at mines under the Indian Mines Act.

Name of explosives.	Quantity of explosives used, in lb., in						
	Coal mines.	Mica mines.	Manganese mines.	Limestone mines.	Stone mines.	Other mines.	Total.
Dynamite	2,199	17,002	5	20	2,433	2,177	23,836
Gelignite	59,641	176,091	91,417	9,020	2,125	449,474	787,768
Monobel	42,722	...	...	1,110	...	...	43,832
Stonobel	167,580	...	...	...	...	...	167,580
Dynobel	242	...	...	...	...	...	242
Bobbinite	15	...	...	...	...	...	15
Raunkol	9,960	...	...	...	...	...	9,960
Liquid Oxygen	112,881	...	...	...	...	...	112,881
Gunpowder	2,751,418	10,014	110,573	270,918	159,684	409,305	3,711,912
Picric Powder	...	...	...	...	1,846	...	1,846
Number of detonators used	778,052	1,478,078	572,947	8,409	61,100	845,010	3,743,596

APPENDIX II.

ACCIDENTS IN MINES.

Table No. 1.

Fatal Accidents during the year 1937.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
		EXPLOSION AND IGNITIONS OF FIRE-DAMP—(*2 deaths*).				
1	18th May, 8 A.M.	Choitodih Mine, Katrasgarh P.O. Bihar.	The Tata Iron & Steel Co., Ltd.	Sukur Chamar, (*m.*), 50, *Miner.*	Coal .	Inflammable gas was expelled from the rise side of a goaf in a seam 3½ feet thick, when a fall of roof occurred in the goaf. The inflammable gas was ignited by the open lamp of a miner who was fatally burnt. Inspection and enquiry made.
2	1st July, 10-30 P.M.	Chasnalla Mine, Pathardih P.O., Bihar.	Chasnalla Coal Co.	Sukhu Manjhi, (*m.*), 45, *Coal-cutter.*	Coal .	Two miners entered their working place in an open lamp mine and ignited an accumulation of inflammable gas with an open light. One of them was severely burnt and died nine days later. Inspection and inquiry made.
		FALLS OF ROOF AND SIDES. (*a*) **Falls of roof**—(*78 deaths*).				
3	1st January, 2 A.M.	Kirkend Mine, Kusunda P.O., Bihar.	K. D. Worah.	Budhu Manjhi, (*m.*), 30, *Coal-cutter.*	Coal .	While a miner was working in a depillaring area, a piece of coal 9″ × 6′ × 3″ fell from the roof from a height of 14 feet and struck him. He succumbed to his injuries 24 hours later. Inspection and enquiry made.
4	1st January, 4-15 A.M.	Mosaboni Mine, Ghatsila P.O., Bihar.	Indian Copper Corporation, Ltd.	V. Achuthan Nair, (*m.*), 40, *Blaster.*	Copper .	Deceased after firing the last round of shots in a stope entered the place to examine the result of blasting when a mass of stone, measuring 6′ × 5′ × 1′, fell on him from the hanging wall. He was killed instantly. Inspection and enquiry made.
5	25th January, 5-30 P.M.	Kusunda-Nyadee Mine, Kusunda P.O., Bihar.	Kusunda & Nyadee Collieries Co.	Rodi Kora, (*m.*), 30, *Miner.*	Coal .	Deceased was struck by a piece of shale, about 5′ × 2′ × 6″, which fell from a height of 27 feet and received injuries which proved fatal 29 hours later. Inspection and enquiry made.

6	1st February, 2-30 P. M.	Kurharbaree mine, Giridih P. O., Bihar.	State Railways' Coal Department.	1. Kodo Dosadh, (*m.*), 34. 2. Bandhu Gope, (*m.*), 19, *Coal-cutters.*	Coal	While filling coal near the edge of a goaf the deceased were killed by a fall of roof, about 8′ × 5′ × 4′ which suddenly became dislodged from a slip at a height of 6 feet. Inspection and inquiry made.
7	5th February, 12-30 A. M.	Katras-Choitodih Mine, Katrasgarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Dewani Dusad, (*m.*), 32, *Coal-cutter.*	Coal	Deceased was engaged in his working place in a depillaring area when a piece of roof stone, 2′ × 1′-6″ × 1′-2″, fell from a height of 7½′ feet and he sustained injuries which proved fatal. Inspection and inquiry made.
8	9th February, 3-30 A. M.	Pretoria Mine, Charanpur P. O., Bengal.	Seebpore Coal Co., Ltd.	Ramdhani Mahato, (*m.*), 48, *Labourer.*	Coal	While setting a prop at the edge of a goaf, deceased was fatally injured by a peace of shale, about 5′ × 3′ × 5″ thick, which fell on him from a height of about 14 feet. Inspection and inquiry made.
9	11th February, 1-30 P. M.	Jamuria Nos. 7 & 8 Pit Mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Tusoo Manjhi (*m.*), 30, *Coal-cutter.*	Coal	Deceased entered a gallery after blasting operations to make an examination. While he was sounding the roof a mass of stone, 4′ × 1′ × 1′-2″, fell on him from a height of 6 feet and killed him instantly. Inspection and inquiry made.
10	20th February, 11 A.M.	Toposi Mine, Toposi P. O., Bengal.	Bansra Coal Co., Ltd.	Ram Rudra *Chatterjeem* (*m.*), 46, Contractor's *Manager.* (2) Khoka Baur (*m.*), 33, *Machine attendant.*	Coal	While the deceased and a few other workers were resting at a junction of haulage roads, a mass of roof stone, about 12′ × 9′ × 6″ thick, suddenly fell from a height of 6 feet. The deceased were killed instantly and a miner sustained slight injuries. Inspection and enquiry made.
11	24th February, 1 P M.	Khas Govindpur Mine, Katrasgarh P. O., Bihar.	Khas Govindpur Coal Company.	Sudu Deshwali, (*m.*), 52, *Coal cutter.*	Do.	While deceased was loading a basket of coal in a gallery 7 feet high, a mass of shale, about 8′ × 7′ × 3″, fell on him from the roof. He sustained serious injuries which proved fatal 26 hours late. Inspection and enquiry made.
12	4th March, 3 A.M.	West Jamuria Mine, Charanpur P. O., Bengal.	West Jamuria Coal Co., Ltd.	(1) Poiton Singh (*m.*), 30, *Timber Mistry.* (2) Mohan Singh, (*m.*), 21. (3) Lachman Singh, (*m.*), 36, *Timber coolies.*	Do.	During depillaring operations four props were dislodged when a shot was fired in a 'stook' and while a timberman and two labourers were re-setting the last of the four props the roof in the goaf collapsed killing them instantly. Another person was seriously injured. Inspection and enquiry made.
13	9th March, 7-30 A.M.	Mosaboni Mine. Ghatsila P. O., Bihar.	Indian Copper Corporation Ltd.	Abdul Gofoor, (*m*) 31, *Pipe fitter.*	Copper	The compressed air pipe for machine drilling was being extended in a stope, when a mass of stone, 20′ × 15′ × 2½″, fell from the hanging wall. Deceased was fatally injured and another man received serious injuries. Inspection and enquiry made

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			***(a)* Falls of roof**			
14	14th March, 6-30 A.M.	No. 2 Gambrala Mine, Dandot P. O., Punjab.	The Executor of the Estate of late Lala Shanker Das.	Sultan Ali, (*m.*), 21, *Coal cutter.* Rajwali, (*m.*), 33, *Carpenter.*	Coal	While at work on a longwall face, two persons were struck and killed on the spot by a mass of stone, 7′ × 2′—3″ × 1′, which fell from the roof at a height of about 3 feet. Inspection and enquiry made.
15	18th March, 1-30 A. M.	Ekra Khas Mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandi.	Tahalu Gope, (*m.*), 45, *Coal-cutter.*	Coal	Deceased entered a place from where timber had been withdrawn in order to retrieve his basket. A mass of coal, 20′ × 15′ × 2′ thick, fell from the roof and killed him instantly. Inspection and enquiry made.
16	20th March, 7-30 A. M.	Budroochuck Mine, Sijua P. O., Bihar.	Budroochuk Coal Mining Co., Ltd.	(1) Kishan Majhi, (*m.*), 42, (2) Badan Majhi, (*m.*), 35, (3) Somra Majhi (*m.*), 30, *Coal-cutters.*	Coal	As four coal-cutters were walking up a main haulage road at the termination of their relay a mass of roof stone, 24′ × 8′ and from 6″ to 8″ thick, fell from a height of 8 feet. Three of them were killed instantly and the other was seriously injured. Inspection and enquiry made.
17	9th April, 9-15 P. M.	Dobari Mine, Jharia P. O., Bihar.	Keshavji Pitamber, Receiver.	Motka Manjhi (*m.*), 25, Sitla Manjhi (*m.*), 30, *Coal-cutters.*	Coal	The deceased were dressing down roof coal in a gallery, when a mass of coal, 5′ × 6′ × 2′ thick, fell on them from a "slip" at a height of 8 feet. One was killed on the spot and the other died shortly afterwards. Inspection and enquiry made.
18	14th April, 2-30 A. M.	Central Jinagora Mine, Jharia P. O., Bihar.	Central Jinagora Coal & Coke Agency.	Haril Mahato, (*m.*), 30. *Coal-carrier.*	Coal	While deceased was loading coal in a gallery, a mass of stone, 4′-6″ × 4′ and from 2′ to 4″ thick, fell on him from the roof at a height of 6 feet, and he died about three months later. Inspection and enquiry made.

19	14th April, 3 P. M.	Scrampur Mine, Giridih P. O., Bihar.	Government of India State Railway Coal Dept.	(1) *Habib Meah*, (*m.*), 32, (2) Akloo Dusad, (*m.*), 45, *Coal-cutters.*	Coal	While a gang of miners was engaged in cleaning an old roadway, 5′-6″ high, a "bump" occurred in the goaf causing a mass of coal 10′ × 10′ × 3′ to fall from a hidden "slip" in the roof. Two miners were killed on the spot and another received serious injuries. Inspection and enquiry made.
20	18th April, 8 A.M.	No. 8 Gandhala Mine, Dandot, P. O., Punjab.	Wah Stone & Lime Quarry Ltd., and Pandit Gian Chand.	Rushmat Ali, (*m*), 45, *Coal-cutter.*	Coal	While deceased was working on a longwall face a mass of stone fell on to his head from the roof at a height of 2½ feet. He sustained fatal injuries. Inspection and enquiry made.
21	5th May, 5 A.M.	Poniati Mine, Charanpur P. O., Bengal.	Poniati Collieries Ltd.	Karam Singh, (*m.*), 30, *Timber-mistry.*	Coal	While props were being withdrawn from a depillaring area deceased attempted to recover a prop dislodged by a Sylvester prop-drawer. He was killed by a fall of a mass of roof coal, 25′ × 10′ × 2′, which suddenly fell from a height of 16 feet. Inspection and enquiry made.
22	7th May, 11-30 A.M.	Chasnalla Mine, Pathardih P. O., Bihar.	Chasnalla Coal Co.	Sarkar Manjhi, (*m.*), 35, *Coal-cutter.*	Coal	While pushing an empty tub on a tramline deceased was struck and killed instantly by a fall of roof coal, 10′ × 7′—6″ × 4′, which suddenly became dislodged from between three "slips" at a height of about 8 feet. Inspection and enquiry made.
23	23rd May, 4-30 A.M.	Ganhoodih Mine, Jharia P. O., Bihar.	S. B. Banerjee	Parbati Ghatwarin, (*f.*), 42, *Coal-loader.*	Coal	While a female coal-carrier was filling a basket with coal in a gallery, 12 feet high, in which roof coal was being worked a mass of coal 5′ × 2′—6″ × 1′—3″, fell from a slip in the roof. She was killed instantly. Inspection and enquiry made.
24	11th June, 11-15 A.M.	Jamadoba Mine, Jealgora P. O., Bihar.	The Tata Iron & Steel Co., Ltd.	Matabdin, (*m.*), 40, *Labourer.*	Coal	A timberman and his two assistants were set to withdraw three props in a depillaring area. They had withdrawn two props and while the third was being withdrawn a mass of roof stone, 10′ × 8′ × 6″, became dislodged from a height of 12 feet and struck deceased who succumbed to his injuries shortly afterwards. Inspection and enquiry made.
25	19th June 1-30 P.M.	Namdang Mine, Margherita P. O., Assam.	Assam Railways & Trading Co., Ltd.	Kamora Pathan, (*m.*), 45, *Coal-cutter.*	Coal	While a miner was levering down coal from the roof of an "opening" a piece of coal, weighing 100 lbs., fell from a height of 10 feet. He was struck on the head and killed instantly. Inspection and enquiry made.
26	28th June 11-30 P.M.	Jharia Khas Mine, Jharia P.O., Bihar.	Standard Coal Co., Ltd.	Charan Bhuia, (*m.*), 26, *Loader.*	Coal	While coal was being loaded in a depillaring area in a seam, 26 feet thick, a mass of coal, 6′ × 4′ × 9″, fell from the roof. Deceased was struck by the falling coal and received fatal injuries. Inspection and enquiry made.
27	30th June 4-35 A.M.	Bansdeopur Mine, Kusunda P.O., Bihar.	New Bansdeopur Coal Co., Ltd.	Bolorum Rai, (*m*), 50, *Coal-cutter.*	Coal	Deceased entered a gallery to load slack coal where roof coal was being cut. A mass of coal, 18′ × 6′ × 1′—3″, fell from the roof at a height of 10 feet and he sustained fatal injuries. Inspection and enquiry made.

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(a)* Falls of roof—*contd.			
28	30th June, 3-50 P.M.	Standard (Jharia Khas) mine, Jharia P.O., Bihar.	Standard Coal Co. Ltd.	Lachoo Noonia, (*m.*), 38, *Loader.*	Coal	Deceased was struck by a mass of coal, weighing about 3 cwt., which fell on him from the roof of a gallery 20 feet high where roof coal was being taken down by blasting. He sustained serious injuries which proved fatal eighteen days later. Inspection and inquiry made.
29	8th July, 3-30 P.M.	Jainty Central mine, Karmatar P.O., Bihar.	Jainty Central Colliery Limited.	Babulal (Jalpha) Manjhi, (*m.*), 35; *Coal-cutter.*	Coal	While deceased was at work in a gallery, 4½ feet high, a mass of roof stone, 9′ × 6′ and from 1″ to 1′ thick, fell unexpectedly and killed him instantly. Inspection and enquiry made
30	11th July, 3-30 A.M.	Upper Ghorawari Mine, Junnordeo P. O., Central Provinces.	Hirdagarh Collieries, Ltd.	(1) Sheikh Babu, (*m.*), 35, *Coal-cutter.* (2) Guttu, (*m*), 35. (3) Kashilal; (*m.*), 30, *Loaders.*	Coal	Coal was being loaded after blasting a "stook" in a depillaring area when a mass of shale-roof, about 10′ × 10′ × 8″ thick, suddenly fell from a height of 15 feet killing two loaders instantly. A miner sustained serious injuries to which he succumbed in hospital half an hour later. Inspection and enquiry made.
31	15th July, 5 A.M.	Newton Chickli Mine, Parasia P. O., C. P.	Newton Chickli Collieries Ltd.	Sheik Subhan, (*m.*), 45, *Coal-cutter.*	Coal	While robbing coal from a fenced off gallery deceased was killed by a mass of stone, about 3′ × 2′ × 1′—6″ thick, that fell on him from the corner of a pillar at a height of about 8 feet. Inspection and enquiry made.
32	15th July, 2 P.M.	West Bhuggutdih Mine, Jharia P. O., Bihar.	West Bhuggutdih Colliery Co.	Jai Ram Meah, (*m.*). 35, *Coal-cutter.*	Coal	Deceased left his working place and went through a fence into a goafed area to load fallen coal. He was killed by a mass of roof coal, weighing about 1½ tons, which fell from a height of about 12 feet. Inspection and enquiry made.
33	17th July, 9-30 A.M.	No. 3, North Gambrala Mine, Dancot P. O., Punjab.	The Executors of the Estate of late Lala Shanker Das.	Kalla, (*m.*). 25, *Coal-cutter.*	Coal	While cutting coal on a longwall face a mass of stone fell on the deceased from a height of 3 feet and killed him on the spot. Inspection and enquiry made.

34	17th July, 10 A.M.	Charanpur Mine, Charanpur P. O., Bengal.	Apcar Collieries, Ltd.	Golipi Turi, (*m.*), 30, *Timber-coolie.*	Coal	*While deceased was sounding the roof in a depillaring area, a mass of coal, 4′ × 3′ × 1′ thick, fell from between two concealed "cleats" at a height of 14 feet. He was struck and killed instantly. Inspection and enquiry made.*
35	25th July, 3-30 P. M.	Patmohna Mine, Sitarampur P. O., Bengal.	North Damuda Coal Co., Ltd.	(1) Balai Manjhi (*m.*), 28, *Coal-cutter.* (2) Bhutoo Singh, (*m.*), 28, *Driller.*	Coal	The deceased were killed by a mass of coal, 21′ × 11′ and from 1′—6″ to 2′—6″ thick, which fell without warning from two concealed 'slips' and a 'parting' in the roof at a height of 5 feet. Inspection and enquiry made.
36	9th August, 1-30 P. M.	Jamadoba Mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Noonaram Manjhi, (*m.*), 36, *Coal-cutter.*	Coal	While a miner was engaged in widening out a proposed haulage road, 8 feet high, a mass of stone, 8′ × 3′ × 1′—3″, fell from the roof at a point where a "fault" crossed the gallery. He was struck by the falling stone and received injuries which proved fatal shortly afterwards. Inspection and enquiry made.
37	17th August, 9 P. M.	Kustore (Alkusa North) Mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Budri Koiri, (*m.*), 30, *Loader.*	Coal	While a loader was at work in a gallery 12 feet high in which roof coal has been taken down prior to the extraction of a pillar, a mass of stone, 10′ × 3′ × 2′—6′, fell from the roof and killed him instantly. If supports had been set along a fault which passed through the gallery the accident would have been avoided. Inspection and inquiry made.
38	26th August, 1 A. M.	Poriapur Mine, Churulia P. O., Bengal.	B. Mukherjee & Co.	1. Malinda Muchi (*m.*), 30, 2. Joginda Bouri (*m.*), 28. *Coal-cutters.*	Coal	The deceased left their working place, and passed through a fence to rob coal from the edge of a goaf. They were killed by a fall of roof in the goaf. Inspection and enquiry made.
39	27th August, 3 A. M.	Churulia Mine, Churulia P. O., Bengal.	Churulia Coal Co., Ltd.	Dami Majbian, (*f.*), 33. *Coal-carrier.*	Coal	While three women were loading coal in a gallery, 9 ft. high, a mass of coal and shale, 14′ × 6′ × 9″, fell from the roof. One of the women was killed instantly and two others were seriously injured. Inspection and enquiry made.
40	28th August, 8-30 P. M.	Standard (Benahir Section) Mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Mahabir Bhuia, (*m.*), 30, *Loader.*	Coal	Deceased was loading coal that had been blasted from the roof of a gallery, 12 feet high, when a mass of roof coal, 2′ × 2′ × 1′—6″, fell on him from between two concealed cleavage planes. He sustained serious injuries which proved fatal five hours later. Inspection and enquiry made.
41	30th August, 11-30 P. M.	Chaprasi Kenduatari Mine, Ganwan P. O., Bihar.	Kaloo Ram Modi.	1. Latoo Gope, (*m.*), 42, 2. Mahadeo Singh, (*m.*), 45, *Drillers.*	Mica	While at work in a drive the deceased were struck and killed instantly by a mass of earth and stone which fell from the roof at a height of about 6 feet. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*contd.*			
42	1st September, 2 A. M.	Sitalpur Mine, Ukhra P. O., Bengal.	Sitalpur Coal Co., Ltd.	Fulan Manjhi, (*m.*), 31. *Coal-cutter.*	Coal	While resting at the side of a gallery, a miner was struck by a piece of shale, 2′—6″ × 1′—4″ × 6″, which fell from the roof at a height of 11 feet. He was fatally injured. Inspection and enquiry made.
43	7th September, 5 A. M.	Kustore Mine, Kusunda P. O., Bihar.	Reneegunge Coal Association Ltd.	Bhola Roy, (*m.*), 32. *Coal-cutter.*	Coal	While a miner was at work in a depillaring area a mass of coal, 6′ × 3′ × 5′, fell from the roof and killed him instantly. A concealed semicircular "slip" in the roof coal caused the fall. Inspection and enquiry made.
44	9th September, 11-30 P. M.	Deoli Mine, Neturia P. O., Bihar.	Bengal Coal Co., Ltd.	Sanichar (Alias Ramkishore Dusadh), (*m.*), 40, *Loader.*	Coal	Deceased passed through a fence to rob fallen coal from a depillared area. He was killed by a sudden fall of roof in the goaf. Inspection and enquiry made.
45	11th September, 2 A.M.	Sripur Mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920), Ltd.	Bandhu Meah, (*m.*), 44. *Coal-carrier.*	Coal	While loading coal, deceased was fatally injured by a piece of roof-stone, about 3′ × 2′ × 1½″ thick, which fell on his head from a height of 14 feet. Inspection and enquiry made.
46	13th September, 2 A.M.	Dhori Mine, Bokaro P O., Bihar.	Bokaro & Ramgur, Ltd.	Sitaram Mahato, (*m.*), 22, *Propping coolie.*	Coal	While deceased was erecting a prop under roof coal. a mass of coal, 9′ × 5′ × 2′, fell from a height of ten feet and he sustained injuries which proved fatal. Inspection and enquiry made.
47	9th October, 8-30 A.M.	Baragolai Mine, Margherita P. O., Assam.	The Assam Railways and Trading Co., Ltd.	Matiprasad Newar, (*m.*), 34. *Coal-cutter.* (2) Kabiram Sonar, (*m.*), 24, *Loader.*	Coal	While stripping a gallery, 6 feet wide and 5 feet high, the deceased were buried and killed instantly by a mass of coal and shale weighing about 15 tons which fell from the roof and sides. Inspection and enquiry made.

48	13th October, 7-30 P.M.	Victoria Mine, Kulti P. O., Bengal.	The New Beerbhoom Co., Ltd.	Jadu Manjhi, (m.), 40, *Coal-cutter.*	Coal	While deceased was engaged in a depillaring area in a seam 7 feet thick a mass of roof stone, 6′ × 4′ × 6″, dislodged some supports and fell on him. He was killed instantly. Inspection and enquiry made.
49	19th October, 11-0 P.M.	Lodna Mine, Jharia P. O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Janglee Nonia, (m.), 46, *Loader.*	Coal	While loading coal in a depillaring area, deceased was killed instantly by a fall of roof, 9′ × 4′ × 6″, which fell unexpectedly from a height of 26 feet. Inspection and enquiry made.
50	20th October, 9 A.M.	Ledo (New West) Mine, Margherita P. O., Assam.	The Assam Railways and Trading Co., Ltd.	Lal Bahadur, Newar, (m.), 26, *Coal-cutter.*	Coal	While engaged in dressing the roof, preparatory to setting timber on a new siding deceased was fatally injured by a mass of coal, 4′ × 2′ × 1′—1″, which fell from the roof at a height of 7 feet. Inspection and enquiry made.
51	20th October, 9-45 P.M.	Kustore Mine, Kusunda P. O., Bihar.	Raneegunge Coal Association Ltd.	Guru Charan Singh, (m.), 36, *Propping-mistry.* Siblal Singh, (m.), 32, *Propping-coolie.*	Coal	While props were being withdrawn in a depillaring area a mass of roof stone, 40′ × 10′ × 3′—6″, fell from a height of 12 feet killing the deceased instantly. Inspection and enquiry made.
52	23rd October, 7 P.M.	Dhobani Mine, Ghatsila P. O., Bihar.	Indian Copper Corporation Ltd.	Iswar Sahoo, (m.), 23, *Blaster-helper.* P Mayandi, (m.) 45, *Blaster.*	Copper	While the deceased were engaged in charging shot holes in a stope, a mass of stone, 12′ × 12′ × 4′, fell on them from between two concealed 'slips' in the hanging wall at a height of 6 feet. They were killed instantly. Inspection and enquiry made.
53	8th November, 6 P.M.	South Samla Mine, Pandaveswar P. O., Bengal.	South Samla Colliery Co.	Baro Lakhan Manjhi, (m.), about 30, *Coal-cutter.*	Coal	Deceased was killed instantly, in a working gallery, when a mass of roof coal weighing approximately 73 tons fell from a height of 10 feet. Inspection and enquiry made.
54	12th November, 2 P.M.	New Sinidih Mine, Katrasgarh P. O., Bihar.	N. K. Nag (Receiver).	1. Bideshi Mahali, (m.), 35, 2. Panchu Mahali, (m.), 36, *Coal-cutters.*	Coal	The deceased entered a fenced off goaf to load loose coal and were killed instantly by a mass of shale, measuring about 30′ × 20′ × 1′—6″ which fell from the roof at a height of 4 ft. Inspection and enquiry made.
55	19th November, 4-45 A.M.	Charanpur Mine, Charanpur P. O, Bengal.	Apcar Collieries Ltd.	Birbal Kole, (m.), 40, *Coal-cutter.*	Coal	While a coal-cutter was engaged in loading coal in a depillaring area a large stone fell from inside the goaf and dislodged three props in the working place. He was struck by one of the props and sustained injuries which proved fatal. Inspection and enquiry made.
56	21st November, 1 A.M.	No. 3 North Gambrala Mine, Dandot P. O., Punjab.	The Executors of the estate of late Lala Shanker Dass.	Khan, (m.), 38, *Coal-cutter.*	Coal	While working in a place from where supports had been withdrawn deceased was killed by a mass of stone which fell from the roof at a height of 3 feet. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*a*) Falls of roof—*concld.*			
57	26th November, 11-30 A. M.	Damua Mine, Bamanwara P. O., Central Provinces.	Kanhan Valley Coal Co., Ld.	Shivbhajan, (*m.*), 32. *Coal-cutter.*	Coal	While dressing coal from the side of a pillar after blasting, a miner was struck and fatally injured by a mass of coal, 1′—6″ × 1′ × 1′, which fell from the roof at a height of 11 feet. Inspection and enquiry made.
58	9th December, 4 A. M.	Sendra Mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ld.	Banku Bauri, (*m.*) 28. *Coal-carrier.*	Coal	While engaged in carrying coal from his working place deceased was struck and killed instantly by a fall of roof, about 35′ × 5′ × 3′, which suddenly became dislodged from between to "slips" at a height of 7 feet. Inspection and enquiry made.
59	15th December, 4-30 P. M.	Kajora Mine, Kajoragram P. O., Bengal.	K. C. Pal Choudhury & Brothers.	Mangar Turi, (*m.*), 27. *Loader.*	Coal	In a dopillaring section, deceased was filling his basket with the coal obtained from blasting a "stook", when a piece of roof coal, about 3′ × 2′ × 1′ thick, fell on him from a height of 18 feet. He was killed instantly. Inspection and enquiry made.
60	24th December, 9-30 P.M.	Sitalpur Mine, Sitarampur P.O., Bengal.	Bengal Coal Co., Ltd.	Babulal Passi, (*m.*), 37, *Coal-cutter.*	Coal	Deceased left his working place and entered a fenced off area to rob loose coal from the sides of some pillars. He was struck by a mass of roof-stone, about 9′ × 4′ × 1′ thick, which fell from a height of 8 feet. He sustained serious injuries to which he succumbed 5 hours later. Inspection and enquiry made
61	28th December, 10 A.M.	Balaghat Mine, Bharweli. P.O., Central Provinces.	The Central Provinces Manganese Ore Co., Ltd.	Hari, (*m.*), 29, *Roof dresser.*	Manganese ore.	Deceased was dislodging some loose roofstone in a stope when he slipped and a mass of roof, 3′ × 3′ × 1′—6″, fell on him from a height of 8 feet. He was killed instantly.
62	31st December, 6-45 P.M.	Lodna Mine, Jharia P.O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Bandhu Bhuia. (*m.*), 26, *Loader.*	Coal	While deceased was loading coal on a haulage road, a mass of coal, measuring about 14′ × 5′—6″ × 6′—6″, suddenly became dislodged from between two "slips" in the roof at a height of 6 feet. He was struck by the edge of the fall and killed instantly. Inspection and enquiry made.

(b) Falls of Sides—(70 deaths).

63	6th January, 11 P.M.	Tawa Valley Mine, Ghoradongri P.O., Central Provinces.	Walji Bhimji & Sons.	(1) Sarum Mehra, (m.), 25, (2) Gakru Mehra, (m.), 23, (3) Bondar Mehra, (m.), 22, *Stone cutters.*	Coal	While the floor of a new incline cutting was being cut down to the coal seam a mass of sandstone, 30′ × 10′ and from 1′ to 4′ thick, fell from the side at a height of 20 feet. The deceased were buried and killed instantly. The fall exposed a concealed "slip" in the side. Inspection and enquiry made.
64	16th January, 5 A.M.	Bararee Mine, Jealgora P.O., Bihar.	East Indian Coal Co., Ltd.	Ganpat Chamar, (m.), 24, *Loader.*	Coal	While engaged in carrying coal to the loading line a loader was struck and fatally injured by a mass of coal, 8′ × 2′—6″ × 2′, which fell from the side of a pillar at a height of 23 feet. Inspection and enquiry made.
65	21st January, 4 P.M.	Sudi Mine, Sitarampur P.O., Bengal.	Messrs. Morarji, Mulraj & Co.	Chota Sambhu Kora, (m.), 26, *Coal-cutter.*	Coal	A miner left his working place, entered a disused gallery and began to cut coal beneath a stone band. A portion of the band, about 8′ × 2′-6″ × 2′ × 4″ thick, broke away from a height of ½ feet and partially buried him. He sustained internal injuries and expired within an hour. Inspection and enquiry made.
66	4th February, 10 A.M.	Bhulanbararee Mine, Pathardih P.O., Bihar.	Bhulanbararee Coal Co., Ltd.	Ram Sahay Mahato, (m.), 37, *Timber-coolie.*	Coal	Following depillaring operations, deceased with another person was carrying props that were being withdrawn from a working place, when a mass of Coal, weighing about 8 tons, suddenly fell from the side of an adjoining pillar. Deceased was buried under the fall and killed, while his companion received serious injuries. Inspection and enquiry made.
67	18th February, 4-30 P.M.	Kurhurbaree Mine, Giridih P.O., Bihar.	Govt. of India State Railway Coal Department.	Raghunath Bhooia, (m.), 38, *Coal-cutter.*	Coal	While the extraction of a pillar was proceeding, a mass of stone band and coal 4′ × 1′—6″ × 6″, rolled against a prop 18′ long and dislodged it. The prop struck deceased who was sitting about 12 feet away and killed him on the spot. Inspection and enquiry made.
68	26th February, 3-30 P.M.	Salaiya Paharhai Mine, Megaon P.O., Central Provinces.	Dyer's Stone Lime Co., Ltd.	Bharat, (m.), 20, Ram Ratia, (m.), 30, Jawahar, (m.), 24, Sukh Deo, (m.), 25, Birdan, (m.), 50, Ram Nath, (m.), 40, Umrao, (m.), 22, Mst. Mulia, (f.), 20, Mst. Chaiti, (f.), 19, *Labourers.*	Lime-stone.	A large portion of the limestone and overburden of a side of an open quarry unexpectedly collapsed and killed nine persons—seven men and two women. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OFROOF AND SIDES—*contd.* **(*b*) Falls of sides—*contd.***			
69	27th February, 3-30 A. M.	Saltore Mine. Dishergarh P. O., Bengal.	Burrakur Coal Co., Ltd.	Karu Meah, (*m.*), 25, *Coal-cutter.*	Coal .	Deceased was sitting in a gallery adjoining a depillaring area. A mass of coal suddenly fell from the corner of a pillar dislodging three props, one of which struck him and killed him instantly. Inspection and enquiry made.
70	2nd March, 5-30 P.M.	South Kujama Mine, Jharia P.O., Bihar.	Bagdigi Kujama Collieries Co.	Antu Rajwar, (*m.*), 32, *Coal-cutter.*	Coal .	Contrary to orders deceased undercut the side of a pillar which he was dressing along with others preparatory to depillaring when a mass of coal, about 6′ × 6′ × 1′—6″ fell on him. He was killed instantly. Inspection and enquiry made.
71	3rd March, 9 A.M.	Pattabhirama Mine, Sydapuram P.O., Madras.	S. K. Neelakanteswarama.	Kondlapudi Subbadu. (*m.*), 22, *Driller.*	Mica .	While engaged in dressing down overburden in a quarry, three drillers brought about a fall of rock, measuring 12′ × 9′ × 6′, and fell along with it. Deceased was buried and suffocated. The others sustained serious injuries. Inspection and enquiry made.
72	12th March, 7-30 P.M.	Jharia Khas Mine, Jharia P. O., Bihar.	The Standard Coal Co., Ltd.	Kesho Muchi, (*m.*), 27, *Coal-cutter.*	Coal .	While drilling a shot hole deceased was seriously injured by a piece of stone which slid down from an old goaf. He succumbed to his injuries 7 days later. Inspection and enquiry made.
73	15th March, 2 P.M.	Gulla Hudki Mine. Katangjherri P. O., Central Provinces.	Messrs. Cheniram Jesraj.	Jagao Peuso, (*m.*) 45, *Labourer.*	Manganese Ore.	Deceased was buried by a fall of loose earth, weighing about 1 ton in a boulder pit. He was dead when extricated.
74	15th March, 4 P.M.	Hindubagh Mine, Hindubagh P. O., Baluchistan.	The Baluchistan Chrome Co., Ltd.	Sultan, (*m.*), 27. *Labourer.*	Chromite	While deceased was working in a tunnel, a mass of stone 10′ × 6′ × 2′ fell on him from the side from a height of about 2 ft. and suffocated him. Inspection and enquiry made.
75	30th March, 10-15 P. M.	Kustore Mine, Kusunda P. O., Bihar.	Raneegunge Coal Association Ltd.	Chandmoni Mahulin. (*f.*). 25, *Coal-carrier.*	Coal .	While engaged in carrying coal from a working place deceased was struck by a mass of coal, 5′ × 4′ × 2′ which fell from the side of a pillar at a height of 12 feet. She sustained serious injuries to which she succumbed two hours later. Inspection and enquiry made.

76	6th April, 11 P. M.	Jogta Mines, Sijua P. O., Bihar.	Messrs. Agabeg Brothers, Ltd.	Chedie Beldar, (m.), 22. Loader.	Coal	Deceased was filling a tub of coal when a mass of coal amounting to several tons fell from the side of a pillar and killed him instantly. Inspection and enquiry made.
77	11th April, 3 P. M.	Taljhari Mines, Taljhari P. O., Bihar.	T. S. Samanto	Puran Chamar, (m.), 36, Quarryman.	Stone	While deceased was attempting to lever down a boulder 6′ × 3′ × 1′—6″ from the side of a quarry, 27 feet deep, it suddenly became dislodged and struck him. He received injuries which proved fatal 7 hours later. A concealed 'slip' on the side was the cause of the fall. Inspection and enquiry made
78	15th April, 8-15 A. M.	Bhowra Mines, Jealgora P. O., Bihar.	The Eastern Coal Co., Ltd.	Lakhiram Rajwar, (m.), 38, Coal-cutter.	Coal	While a gang of miners and loaders was removing loose coal from a fenced off area in a large quarry, a mass of overburden weighing about 10 cwts. fell from the face at a height of about 80 feet. Deceased was struck and killed instantly and a female loader was seriously injured. Inspection and enquiry made.
79	22nd April, 1 P. M.	Lodna Mines, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Gullo Dusadh, (m.), 42, Coal-cutter.	Coal	While the loading of coal blasted from the side of a pillar under extraction, was about to be commenced, a mass of coal measuring about 3′ 1′—6″ × 9″, fell from the side at a height of 25 feet on to deceased. He was killed instantly. Inspection and enquiry made.
80	24th April, 11-15 A. M.	Sawang Mine, Hazaribagh P. O., Bihar.	E. I. & B. N. Railways.	Rupdhar Gond, (m.), 40, Coal cutter.	Coal	While a gang of workers was at work on the slope of a quarry dipping at 1 in 1·7, where extraction of coal was proceeding from dip to rise, a portion of the side measuring 75′ × 10′ × 12′ slipped. Deceased was buried and suffocated and two other miners received serious injuries. Inspection and enquiry made.
81	3rd May, 1 P.M.	Poriarpur Mine. Jamtara P. O., Bihar.	B. Mookherjee & Co.	Mongal Manjhi, (m.), 30, Coal-cutter.	Coal	While miners were engaged in extracting a "stook" of coal there were indications of roof 'weight' in their working place and they all withdrew. One of them returned to recover his tools, and was killed instantly by a mass of coal 3′ × 3′ × 1′ which fell from the side at a height of 9 feet. Had the overhanging coal been taken down before the miners were allowed to cut coal the accident would not have occurred. Inspection and enquiry made.
82	4th May, 7-0 P.M.	Kustore Mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Chaita Ruhidas, (m.), 28, Loader.	Coal	A mass of coal, weighing about 10 cwt., fell off a slip in the corner of a pillar on to deceased as he was passing with a basket of coal. He was killed instantly. Inspection and enquiry made.
83	14th May, 1-30 P.M.	Ghorawari Mine, Junnordeo P. O., Central Provinces.	Hirdagarh Collieries, Ltd.	Uji Kathia, (f.), 35. Labourer.	Coal	A gang of workers was resting in a newly made quarry, 6 feet deep, when a mass of side, weighing about 7 cwt., fell on deceased. She sustained serious injuries to which she succumbed 13 days later. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) Falls of sides—*contd.*			
84	21st May, 4-30 P.M.	Central Jharia Mine, Jharia P. O., Bihar.	Central Jharia Colliery Co.	Sreenath Mahata, (*m.*), 29, *Earth-cutter.*	Coal	While engaged in the removal of overburden in a quarry an earth-cutter was buried by a mass of earth, 24′ × 10′ × 3′, which fell from the side. He died from suffocation before he could be released. If the side had been properly stepped or sloped the accident would not have occurred. Inspection and enquiry made.
85	3rd June, 7 P.M.	Bejdih Mine, Sitarampur P. O., Bengal.	Equitable Coal Co., Ld.	Chand Moni Mejhan. (*f.*), 36, *Loader.*	Coal	While a loader was filling her basket with coal obtained from the floor of a dip gallery, some 10 tons of coal fell without warning from the side of a pillar at a height of 12 feet. She was buried by the fall and killed instantly. The fall exposed a slip. Inspection and enquiry made.
86	10th June, 1 A.M.	Karari Mica Mine, Jhajha P. O., Bihar.	K. K. Basu . .	Mangar Meah, (*m.*), 38, *Daily labourer.*	Mica.	Deceased with others was working in an underground gallery when a fall of side took place. He was caught by the fall and sustained fatal injuries.
87	18th June, 4 P.M.	Gararia Mine, Bansjora P. O., Bihar.	Messrs. Baijnath Jugalkishore.	Motka Pashi, (*m.*), 40, *Coal-cutter.*	Coal.	While the extraction of a pillar was proceeding in a seam 28′ thick, a miner was struck and fatally injured by a mass of coal which fell on him from the side. Inspection and enquiry made.
88	23rd June, 4-30 P.M.	Lodna Mine, Jharia P. O., Bihar.	The Lodna Colliery Co. (1920), Ltd.	Dasu Pasi, (*m.*), 43, *Loader.*	Coal.	While coal was being loaded from a depillaring area in a seam 22 feet thick, a mass of coal 35′ × 18′ × 3′-6″, fell from a pillar at the side of the loading line. Deceased was killed instantly. Inspection and enquiry made.
89	29th June, 4-30 A.M.	Kurhurbaree Mine, Giridih P. O., Bihar.	Government of India State Railway Coal Department.	Babu Lall Chamar, (*m.*), 24, *Coal-cutter.*	Coal.	While deceased was filling a basket with coal in a gallery driven through a pillar preparatory to depillaring, a "bump" occurred in the goaf causing a mass of coal, weighing about 5 to 6 cwt. to fall from the side. Deceased was caught by the fall and fatally injured. Inspection and enquiry made.

90	24th July, 5-30 P.M.	Jamadoba Mine, Jealgora P. O., Bihar.	The Tata Iron & Steel Co., Ld.	Jharn Dass, (*m.*), 34, *Coal-cutter.*	Coal	While a miner was standing on a ladder, levering down side coal after blasting, he overbalanced and fell down the ladder. Before he could recover himself a mass of coal fell from the side from a height of about 8 feet and inflicted injuries which proved fatal five hours later. Inspection and enquiry made.
91	26th July, 2 P.M.	Kargali mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Fulbanthi, (*f.*), 30, *Loader.*	Coal	Deceased was killed in an open working by a piece of stone, 1'—6" × 8" × 6", which fell from the side at a height of about 90 feet. Inspection and inquiry made.
92	6th August, 1 P.M.	Dhariajoba Mine, Kusunda P. O., Bihar.	Dhariajoba Colliery Co., Ltd.	Sital Pashi, (*m.*), 32, *Coal-cutter.*	Coal	While a miner was engaged in removing floor coal in a gallery 14 ft. wide and 25 ft. high in the immediate vicinity of a depillaring area some small pieces of coal fell from the side at a height of about 10 ft. He was seriously injured and died 3 months later. Inspection and enquiry made.
93	11th August, 5 30 P.M.	Mahuapahari Mine, Jhumri Telaiya P. O., Bihar.	Chatturam Darsanram.	Budhan Meah, (*m.*), 21, *Dump picking coolie.*	Mica	Deceased went into an abandoned excavation to recover his pick and while there, was buried by a mass of earth, 12' × 6' × 3' thick, which fell from the side at a height of 13 feet. He was dead when extricated. Inspection and enquiry made.
94	13th August, 12 NOON.	Mudidih Mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd.	Rahan Bhuiya, (*m.*), 32, *Loader.*	Coal	While a miner was dressing the side of a pillar in a depillaring area he dislodged a mass of coal from a height of 18 feet. Deceased, who was attending about 10 feet away from the pillar, showing a light for the miner, was struck by a piece of coal 2' × 2' × 1'—6" and fatally injured. Inspection and enquiry made.
95	21 August, 7-40 A.M.	Pandedih Mine, Sijua P. O., Bihar.	S. N. Daw & Co.	Anand Ram Bilaspuri, (*m.*), 34, *Coal-cutter.*	Coal	Deceased was killed by a fall of a mass of earth from the side of a quarry at a height of 7'—6". Inspection and inquiry made.
96	22nd August, 2-30 P.M.	Pretoria Mine, Charanpur P. O., Bengal.	Seebpur Coal Co., Ltd.	Behari Lodh, (*m.*), 26, *Coal-cutter.*	Coal	While deceased was dressing down side-coal loosened by blasting, his crowbar slipped and he fell on the floor. A mass of about 7 cwt. of coal fell from a height of 8 feet and struck him. He sustained serious injuries to which he succumbed 3 hours later. Inspection and inquiry made.
97	25th August, 12-30 P.M.	Kustore (Burragarh Section) Mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Hasu Bauri, (*m.*), 25. *Coal-cutter.*	Coal	During the extraction of a pillar in a seam 7'—6" thick, a miner was undercutting when a mass of coal, weighing about 10 cwt., fell off a pronounced cleavage plane and a "slip" which was at right angle to it and he sustained fatal injuries. Inspection and inquiry made.
98	8th September, 1-30 P.M.	West Jamuria Mine, Charanpur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Madho Mean, (*m.*), 38, *Loader*	Coal	While loading coal in a depillaring area, a loader was struck by a mass of coal, about 80 lbs. in weight, which fell unexpectedly from the side of a "stook." He sustained injuries which proved fatal eleven days later. Inspection and enquiry made.

APPENDIX II —*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) Falls of sides.—*contd.*			
99	10th September, 11 P.M.	East Jambad Mine, Kajoragram P. O., Bengal.	East Jambad Coal Concern.	Dhanga Manjhi, (*m.*), 47, *Coal-cutter.*	Coal	While engaged in cutting the side of a pillar, a miner was struck by a mass of coal, 8′ × 8′ × 1′–6″, which fell from the side. He was killed instantly. Inspection and enquiry made.
100	14th September, 5 P.M.	Motia Mine, Kodarma P. O., Bihar.	S. K. Sahana and Sons.	Bhikari Gope, (*m.*), 39, *Miner.*	Mica	While working in an open excavation, 6 feet deep, a miner was partially buried by a fall of side, 3′ × 2′ × 2′ thick, which fell on him from a height of 3 feet. He sustained serious internal injuries and died thirteen days later. Had the sides of the excavation been properly sloped or stepped the accident would have been avoided. Inspection and enquiry made.
101	24th September, 11-30 A.M.	Sitanala Mine, Bhojudih P. O., Bihar.	Messrs. Mohatta Brothers.	Tanoo Bauri, (*m.*), 36, *Miner.*	Coal	While two miners were 'robbing' coal from the side of a tramming level, a mass of coal, weighing about 2 tons, was released unexpectedly and fell from a height of 7 feet. One of them was killed instantly and the other received serious injuries. Inspection and enquiry made.
102	1st October, 10 P.M.	Dishergarh West Mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Bhaduri Mallick, (*m.*), 33, *Coal-cutter.*	Coal	While a miner was at work in a depillaring area he was struck by a piece of coal which burst from the side of a pillar. He was fatally injured. Inspection and enquiry made.
103	19th October, 12 Noon.	Central & Lower Jambad Mine, Chora P. O., Bengal.	P. L. Mukerjee (Receiver).	Baboo Lal Bouri (*m.*), 40, *Coal-cutter.*	Coal	Deceased left his allotted working place and was engaged in robbing coal in a gallery when a mass of coal, 10′ × 10′ × 2′, fell upon him from a concealed 'slip' in the side. He was fatally injured. Inspection and enquiry made.
104	20th October, 6 P.M.	Jeetpur Mine, Bhaga P. O., Bihar.	The Indian Iron and Steel Co., Ltd.	Kasi Nath Goala, (*m.*), 35, *Coal-cutter.*	Coal	While a miner was dressing the side of a loading level in the vicinity of a depillaring area a slab of coal 3′ 6″ × 2 × 1′ 6″ burst off the side and fell on his right leg. He succumbed to his injuries 10 days later. Inspection and enquiry made.

106	21st October, 8-45 P.M.	Alkusa North Mine, Kususnda P. O., Bihar.	The Runeegunge Coal Association Ltd.	Basu Manjhi, (*m.*), 32, *Loader.*	Coal	A gang of miners and loaders went into a gallery which was fenced off because the side was dangerous due to the presence of a small fault. They robbed the side and corner of a pillar and while they were loading a mass of coal, 5′ × 5′ × 1′—2″, fell off the fault killing one of the loaders instantly. Inspection and enquiry made.
106	22nd October, 12-50 P.M.	Katras-Choitodih Mine. Katrasgarh P. O., Bihar.	Burraknr Coal Co., Ltd.	Dharam Malla, (*m.*), 35, *Coal-cutter.*	Coal	While extracting a "Stock" of coal. 9 feet high, that was left to support a prop in a gallery, a miner was struck by a mass of coal, 3′ × 2′ × 2′, which he had dislodged from the "Stook", and received serious injuries to which he succumbed a few hours later. Inspection and enquiry made.
107	22nd October, 1-0 P M.	Serampur Mine, Giridih P. O., Bihar.	The Government of India.	Bandhu Meah, (*m.*), 29, *Coal cutter.*	Coal	In a roadway 10 ft. high a miner was standing on a ladder dressing the side near the roof with a crowbar. He overbalanced and fell off the ladder and a block of stone, 1′—6″ × 1′ × 9′, which he had been dressing, fell on his left leg, causing injuries which proved fatal four days later. Inspection and enquiry made.
108	26th October, 2 P.M.	Bararee Mine, Jealgora P. O., Bihar.	The East Indian Coal Co., Ltd.	Lutu Rai, (*m.*), 40, *Coal-cutter.*	Coal	While a miner was engaged in cutting a recess in the side of a pillar at the site of a fire stopping a mass of coal, weighing about 2 tons. fell from the side. He sustained fatal injuries. Inspection and enquiry made.
109	29th October, 2 P.M.	Jamuria Mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Lodai Manjhi, (*m.*), 50, *Stone-dresser.*	Coal	A stone dresser was struck and fatally injured when a small piece of stone fell unexpectedly from the corner of a pillar from a height of 6½ feet. Inspection and enquiry made.
110	1st November, 2 A.M.	Dhemo Main Mine, Sitarampur P. O., Bengal.	Dhemo-Main Coal Co., Ltd.	Padam Bahadur, (*m.*), 35, *Coal-cutter.*	Coal	While deceased was carrying a basket of coal a mass of coal, 9′ × 5′ × 1′—6″, fell on him from a cancealed 'slip' in the corner of a pillar at a height of 12 feet. He sustained injuries from which he died seven hours later. Inspection and enquiry made.
111	4th November, 5-0 P.M.	Kendwadih Mine, Kusunda P. O., Bihar.	The East Indian Coal Co., Ltd.	Bhondu Rajhowar, (*m.*), 28, *Loader.*	Coal	While a loader was pushing an empty tab along a level road a mass of coal weighing about 3 cwt. fell from the side from a height of 15 feet. He was killed instantly. Inspection and enquiry made.
112	4th November, 5-30 P.M.	Dhariajoba Mine, Kusunda P. O., Bihar.	Dhariajoba Colliery Co., Ltd.	Narayan Chamar, (*m.*), 35, *C. P. Miner.*	Coal	While deceased was resting near the side of a pillar, a piece of coal. 2′ × 1′ × 9″, fell from the side at aheight of 20′ feet and struck him. He sustained serious injuries and died 30 hours later. Inspection and enquiry made.
113	10th November, 10-30 A.M.	Victoria West Mine, Dishergarh P. O., Bengal.	The New Beerbhoom Coal Co., Ltd.	Satchitanand Lall, (*m.*), 44, *Mining Sirdar.*	Coal	Deceased was dressing loose coal from the side of a gallery, 13 feet high, when a piece of coal fell on his foot, inflicting serious injuries. Pneumonia supervened, and he died eleven days later. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			FALLS OF ROOF AND SIDES—*contd.*			
			(*b*) Falls of sides—*concld.*			
114	24th November, 11 A.M.	Jamadoba Mine, Jharia P. O., Bihar.	The Tata Iron and Steel Co., Ltd.	Daroga Meah, (*m.*), 27, Manglu Meah. (*m*), 28, *Coal carriers.*	Coal	The deceased with others were loading fallen coal from a gallery 12 feet high preparatory to setting supports and commencing depillaring operations, when a mass of coal, 15′ × 4′ × 8′, suddenly fell from the side of a pillar. The deceased were killed on the spot and another person sustained serious injuries It is presumed that 'weighting" from an adjoining goaf caused the coal to fall without any warning. Inspection and enquiry made.
115	30th November, 1 P. M.	Lodna Mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Sampat Pashi, (*m.*), 42, *Coal-cutter.*	Coal	After blasting, a miner was dressing loose coal from the side of a pillar under extraction by standing on a ladder, when a mass of coal weighing about a ton suddenly fell. He was struck and sustained injuries which proved fatal shortly afterwards. Inspection and enquiry made.
116	14th December, 4 P. M.	Partabpur Mine, Hazaribagh P. O., Bihar.	Misrilal Murarka.	Dhram Chamar, (*m.*), 30, Dukhi Chamar, (*m.*). 20, *Miners.* Somar Kahar, (*m.*), 15, *Domestic servant.*	Mica	The three deceased were killed by a fall of side in an open excavation for mica. Inspection and enquiry made.
117	21st December, 12-10 P. M.	Gua Iron Ore Mine, Gua P. O., Bihar.	The Indian Iron & Steel Co., Ltd.	Bharat, (*m.*), 39, *Miner.*	Iron Ore.	Contrary to orders deceased was removing ore from a bench in a quarry when he released a boulder, 4′ × 3′ × 1′—3″ which suddenly turned over and crushed him against the side. He was killed almost immediately. Inspection and enquiry made.
118	24th December, 9 A. M.	Lalki Samseharia Mine, Jhumri-Telaiya P. O., Bihar.	Chatturam Harsanram.	Budhni Jolahin. (*f.*), 50. *Labourer.*	Mica.	While working in an excavation. 4 feet deep made in an old dump, deceased was buried by a fall of loose side. She was dead when extricated. Inspection and enquiry made.

IN SHAFTS (ROPES AND CHAINS BREAKING)—*2 deaths.*

119	30th March, 12 Noon.	Dobari Mine, Jharia P. O., Bihar.	Keshavji Pitamber, Receiver.	Kurda Bauri, (*m.*), 45, *Chargeman.*	Coal.	Deceased was being raised in a cane basket up a sinking shaft, 20 feet deep, when the steel winding rope 1" diameter broke, and he fell to the bottom of the shaft. He sustained serious injuries to which he succumbed five days later. Inspection and enquiry made.
120	27th May, 5 P. M.	Ratibati Mine, Kalipahari P. O., Bengal.	Ratibary Collieries Ltd.	Nabi Meah, (*m*), 22 *Coal-cutter.*	Coal .	In a shaft 266 feet deep a cage containing six persons, including deceased, had been raised about 30 feet above the shaft bottom, when the end links of two bridle chains broke. This caused the cage to tilt with the result that deceased fell from the cage to the shaft bottom and sustained injuries to which he succumbed almost immediately. Inspection and enquiry made.

IN SHAFTS (WHILST ASCENDING OR DISCENDING BY MACHINERY)—*5 deaths.*

121	20th August 7-50 A. M.	Banksimula 7 and 8 Pits Mine. Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	(1) Kali Mochi (*m.*), 23, (2) Basudeb Dass, (*m.*), 25, (3) Bhonda Passi, (*m.*), 28, *Pumpmen.*	Coal .	While three pumpmen were ascending a shaft 925 feet deep, in a sinking bucket, the bow of the bucket broke resulting in the three men being thrown out, and falling to the bottom of the shaft—a distance of 210 feet. They were killed instantly. Expert examination revealed that the fracture of the mild steel bow was due to "corrosive fatigue" coupled with shock. Inspection and enquiry made.
122	26th September, 10 P. M.	Lodna Mine, Jharia P. O., Bihar.	The Lodna Colliery Co. (1920), Ltd.	Murat Barhi, (*m.*), 50, *Fitter.*	Coal .	While ascending a sinking shaft a fitter sat on the rim of a kibble and at a midshaft inset, where there was a landing platform, he fouled a girder and fell out of the kibble to the bottom of the shaft a distance of 150 feet. He was killed instantly. Inspection and enquiry made.
123	4th October, 5 P. M.	Ghusick Mine, Kalipahari P. O., Bengal.	Gusick Coal Co., Ltd.	Kashi Bouri, (*m.*), 30, *Onsetter.*	Coal .	While ascending a shaft 328 feet, deceased fell out of the cage to the bottom of the shaft and was killed instantly. Inspection and enquiry made.

IN SHAFTS (FALLING DOWN SHAFTS)—*1 death.*

124	30th April, 1-0 A. M.	Kustore Mine, Kusunda P. O., Bihar.	The Raneegunge Coal Association Ltd.	Shamlal Kahar, (*m.*), 22, *Tippler Trolleyman.*	Coal .	While deceased was helping to operate a single tub rotary tippler at the top of a staple pit, 70 ft. deep, he slipped and fell through the open platform of the tippler into the shaft. He succumbed to his injuries three hours later. If sheets or expanded metal had been provided on the platform and sides of the tippler, the accident would have been avoided. Inspection and enquiry made.

IN SHAFT (MISCELLANEOUS)—(*4 deaths*).

125	17th June, 7 30 A.M.	Methani Mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ld.	Barhan Dhobi, (*m.*), 29, *Labourer.*	Coal .	Deceased was standing inside a cage at the top of a shaft receiving rails which were being loaded when a rail, which was handed to him slipped and struck him. He sustained serious injuries to which he succumbed seven days later. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			IN SHAFT (MISCELLANEOUS)—(*4 deaths*)—*contd.*			
126	19th June, 5-30 P.M.	Badia Mine, Ghatsila P. O., Bihar.	Indian Copper Corporation, Ld.	Dubraj, (*m.*), 30, *Trammer.*	Copper .	Deceased with three others was working in a shaft from a cradle suspended from a crab winch. As the cradle was being lowered, the gearings of the winch became accidently disengaged and the cradle despite the brake, descended the shaft through a distance of 165 feet and plunged into water, about 15 feet deep, in the sump. Deceased was dead when recovered. Inspection and enquiry made.
127	30th October., 11 A.M.	Mosaboni Mine Ghatsila P. O., Bihar.	Indian Copper Corporation, Ld.	Abdul Gafur, (*m.*), 47, *Machine shop Mistry.*	Copper .	While engaged in selecting the sites in an inclined shaft for putting in additional rollers, deceased was accidentally run over by the descending skip and fatally injured. Inspection and enquiry made.
128	23rd November, 3 P.M.	Modern Satgram Mine, Kusunda P. O., Bihar.	Modern Satgram Coal Co., Ld.	Sudan Bauri, (*m.*) 24, *Labourer.*	Coal .	While a column of exhaust and delivery steam pipes was being lowered down a sinking shaft 350 feet deep by means of a crab winch. the hook of the pulley block suddenly broke, allowing the column to fall down the shaft. Deceased, who was watching the lowering operation, was struck by some of the detached pipes and fatally injured. Inspection and enquiry made.
			SUFFOCATION BY GASES—(*2 deaths*).			
129	6th October, 10-30 A.M	Ena Mine, Jharia P. O., Bihar.	North-West Coal Co., Ld.	Mahabir Singh, (*m.*), 47. Akal Majhi, (*m.*), 35, *Shaft-sinkers.*	Coal .	After firing 7 sumping holes each containing 14 ozs. of gelignite in a sinking shaft, 126 feet deep, the kibble was run up and down for half an hour to clear the smoke. The sinkers then resumed work and worked in the shaft for three hours. They were affected by nitrous oxide fumes, the extreme symptoms developing several hours later. Two of them afterwards died and the others recovered. Inspection and inquiry made.

BY EXPLOSIVES—(*15 deaths*).

130	11th January, 11 P.M.	Chandametta Mine, Parasia P. O., C. P.	Pench Valley Coal Co., Ld.	Dulley Mehra, (*m.*) 32, *Coal-cutter*.	Coal	Deceased left his working place, passed through a fence and entered an area where blasting operations were being carried on. He was struck and killed instantly by a piece of coal projected by the shot. Inspection and enquiry made.
131	9th February, 1 P.M.	Kalyanpur Lime stone Mine, Banjari P. O., Bihar.	Kalyanpur Lime Works, Ld.	Balkeshar Mallah, (*m.*) 28, *Shot-firer*.	Lime-stone.	During blasting operations a piece of stone, 5″ × 5″ · 4″ was projected and struck deceased on the head and killed him instantly. Inspection and enquiry made.
132	3rd March, 7-30 A.M.	Katheru Stone Mine, Rajahmundry P. O., Madras.	A. Lakshmanaswamy Naidu.	Chella Subbadu, (*m.*) 45, *Stone-breaker*.	Stone	During blasting operations deceased, who failed to take shelter, was struck by a piece of rock which was projected by a shot fired at a place, 279 feet distant. He sustained injuries to which he succumbed 36 hours later. Inspection and enquiry made.
133	10th March, 2-30 P.M.	Nimod Mine, Kekri P. O., Rajputana.	Labh Chand & Co.,	Hardeo Daroga, (*m.*) 34, *Shot-firer*.	Mica	While charging a shot hole a premature explosion of gunpowder took place and fatally injured deceased. Inspection and enquiry made.
134	25th April, 2 A.M.	Newton Chickli Mine, Parasia P. O., C. P.	Newton Chickli Collieries, Ld.	Motilal Gauli, (*m.*) 25, *Coal-Cutter*.	Coal	Deceased was assisting his companion in stemming a shot-hole charged with gunpowder when the shot exploded and fatally injured him. It is presumed that either of them inadvertantly set fire to the shot from the open lights that were burning closeby. Inspection and enquiry made.
135	16th May, 12-30 P.M.	Wah Mine, Wah R. S. P. O., Punjab.	The Associated Cement Co., Ld.	Banka, (*m*), 34, *Shot-firer*.	Lime-stone.	While a shot-hole was being charged a premature explosion of the gunpowder took place and seriously injured the shot-firer and two other persons sitting near him. The shot-firer succumbed to his injuries ten days after the accident. Inspection and enquiry made.
136	18th May, 5 P.M.	Khas Jinagora Mine, Jharia P. O., Bihar.	B. K. Chakraborty	(1) Dibakar Bauri, (*m*), 39, *Shot-firer*, (2) Mahindi Bouri, (*m*), 38, (3) Hela Bouri, (*m*), 23, *Coal-cutters*.	Coal	While preparations were being made for blasting in an underground gallery, a shot-firer and four others were seriously burnt by an ignition of a quantity of gunpowder that was placed in a metal case. Subsequently three of them succumbed to their injuries. Inspection and enquiry made.
137	10th August, 12-15 P.M.	Datla Mine, Junnoredo P. O., C. P.	Amalgamated Coal-fields, Ld.	Parmu Lohar, (*m*), 32, *Coal-cutter*.	Coal	Deceased disregarding the orders of a shot-firer, passed through a fence and went to a gallery where a shot had hung fire. He was within 20 feet of the face when the shot exploded. He sustained serious injuries to which he succumbed 17 days later. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accident during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			BY EXPLOSIVES—(*15 deaths*)—*contd.*			
138	14th August, 1 P.M.	Rampur Mine, Rampur Colliery P. O., Orissa.	Hingir Rampur Coal Co., Ld.	Parma Gauda, (*m.*), 50, *Coal-cutter.*	Coal	Deceased delayed after lighting two shots in a gallery and when the charges exploded he sustained serious injuries to which he succumbed shortly afterwards. Inspection and enquiry made.
139	3rd September, 2-30 P M.	Sinidih Mine, Katrasgarh P. O., Bihar.	Sinidih Coal Concern, Ld.	Parshade Kole, (*m.*), 32, *Coal-cutter.*	Coal	Deceased went to a place where a misfire had occurred and relighted the fuse of the charge. The shot hung fire and as he was returning to the place the shot exploded. He sustained fatal injuries. Inspection and enquiry made.
140	13th September, 6 A.M.	Kargali Mine, Bokaro P. O., Bihar.	State Railways	Aklu Mahato, (*m.*), 30, *Shot-firer's cooly.*	Coal	While deceasd was assisting in blasting operations, with liquid oxygen explosives, one charge in a round of five exploded prematurely and he sustained injuries which proved fatal. Inspection and enquiry made.
141	7th December, 4-30 P.M.	Sri Venkata Sitaramakrishna Mica Mine, Sydapuram P. O., Madras.	Balumur Subbaramaih Garu.	Eruvuru Yallagadu, (*m.*), 25, *Cooly.*	Mica	While removing loose rock in an underground gallery after blasting operations a misfired charge was exploded, resulting in serious injuries to deceased to which he succumbed twenty days later.
142	29th December, 6-45 A.M.	Gua Iron Ore, Ropeway (H. D. Buru Section), Gua P. O., Bihar.	The Indian Iron and Steel Co., Ld.	Banua, (*m.*) 24, *Blaster.*	Iron Ore	A piece of stone was projected a distance of 373 feet during blasting operations in a quarry and struck deceased who was retiring to a place of safety in an adjoining quarry. He received injuries which proved fatal five days later. Inspection and enquiry made.
			HAULAGE—(*33 deaths*).			
143	14th January, 9-50 P M.	Newton Chickli Mine, Parasia P. O., Central Provinces.	Newton Chickli Collieries, Ld.	Bhunnilal Dhobi, (*m.*), 20, *Tub-filler.*	Coal	While deceased was hand-shunting an empty tub at the bottom of a haulage incline, he was caught by a train of runaway tubs and killed instantly. Inspection and enquiry made.

144	6th February, 3-45 A.M.	Gopalichuk East Mine, Jharia P. O., Bihar.	Gopalichuck Coal Co., Ld.	Tilakdhari Dosadh, (*m.*), 27, *Trolleyman.*	Coal	A trolleyman was riding up a haulage road on a set of loaded tubs by standing on the buffers of the leading tub, when his head caught a timber support placed across the road. He was thrown over the tub and sustained serious injuries from which he afterwards died. Inspection and enquiry made.
145	16th February, About 1 A.M.	East Khas Jharia Mine, Jharia P. O., Bihar.	East Khas Jharia Colliery Co., Ltd.	Manik Meah, (*m.*), 45, *Trammer.*	Coal	Deceased was standing by the side of a tramline when a tub, which was running down a gradient of one in 60, overturned at a curve and he sustained injuries which proved fatal. Inspection and inquiry made.
146	20th February, 7 A.M.	Lodna Nos. 4 and 5 Pits Mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Naku Kanu, (*m.*), 36, *Haulage engineman.*	Coal	Deceased attempted to lubricate the drum bush of a main and tail rope haulage while a set of four empty tubs, which was being lowered down a haulage road dipping 1 in 10, was temporarily stopped. The tubs moved down suddenly and his arm was caught between the spokes of the spur wheel causing serious injuries which proved fatal about 6 days later. Inspection and enquiry made.
147	24th February, 11-30 A.M.	Jamuria Mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Sreemati Bourin, (*f.*), 18, *Labourer.*	Coal	In attempting to get clear of a moving set deceased crossed the haulage line tripped over the endless rope and was struck by a tub. She sustained injuries which proved fatal 5 hours later. Inspection and enquiry made.
148	3rd March, 8-30 P.M.	Argada Mine, Argada P. O., Bihar.	Bengal Nagpur Railway Co., Ltd.	Dukala, (*m.*), 22, *Coal-cutter.*	Coal	While deceased was pushing a set of three empty tubs on a tramline he was overtaken by another set of five empty tubs and received serious injuries to which he succumed 17 days later. Inspection and enquiry made.
149	6th March, 2-15 P.M.	Nandi Mine, Nandi P. O., Bengal.	Adjai Coal Co., Ltd.	Akalia Bauri, (*m.*), 26, *Trolleyman.*	Coal	Three trolleymen were attempting to re-rail a loaded tub when it accidentally moved sideways and crushed deceased against a brick wall. He sustained internal injuries to which he succumed two days later. The trolleymen should not have attempted to re-rail the tub at a place where there was insufficient clearance between the rails and sides. Inspection and enquiry made.
150	30th March, 1-30 P.M.	Kuardi Mine, Kalipahari P. O., Bengal.	Kuardi Coal Co, Ltd.	Bhatoo Manjhi, (*m*), 31, *Coal-cutter.*	Coal	While a set of 18 tubs was being lowered down a gradient of 1 in 15 the three front tubs got uncoupled and ran wild. Deceased who was pushing an empty tub 600 feet below, was struck and killed instantly. An unsuitable type of coupling was the cause of the occurrence. Inspection and enquiry made.
151	20th April, 7 P.M.	Khewra Mine, Khewra P. O., Punjab.	Government of India.	Mohammad Hussain (*m.*), 25, *Labourer.*	Rock salt	While pushing a loaded tub on a fairly flat track deceased slipped and fell down on a rail. He sustained some internal injuries and died almost immediately after the accident. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			HAULAGE—(*33 deaths.*)			
152	7th May, 9-45 P.M.	Newton Chickli Mine, Parasia P. O., Central Provinces.	Newton Chickli Collieries, Limited.	Jagannath Kirar, (*m.*), 35, *Tub-filler.*	Coal	While awaiting the arrival of empty tubs deceased was leaning against a loaded set with his body between two tubs. Another set of loaded tubs came down and bumped against the stationary tubs. He sustained serious injuries to which he succumed the following day. Inspection and enquiry made.
153	25th May, 4 A.M.	Sripur Mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Bisu Bauri, (*m.*), 35, *Onsetter.*	Coal	On an endless haulage, while deceased and two trammers were re-railing a loaded tub, a clipman brought down two more sets of loaded tubs in quick succession. When uncliped, the third set collided with the second which bumped into the derailed tub, crushing deceased. He succumbed to his injuries 5 days later. Inspection and enquiry made.
154	29th May, 3-45 P.M.	Victoria West Mine, Barakar P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Bisra Nath Misir, (*m.*), 35, *Labourer.*	Coal	While a set of six loaded tubs was being drawn up a haulage road, dipping at 1 in 6¼, the haulage rope broke, and the tubs ran wild. Deceased, who, with three other persons was travelling on the haulage road contrary to orders, was struck by the set and fatally injuried. Inspection and enquiry made.
155	4th June 1937, 10 A.M.	Gandudih Mine, Kusunda P. O., Bihar.	Central Alkusa Colliery Co.	Bharos Pashi, (*m.*), 45, *Trolleyman.*	Coal	While a train of 14 loaded tubs was about to be lowered down a haulage plane dipping at 1 in 8, the drawbar of the second tub broke, releasing the leading 12 tubs which ran wild. Deceased, who came to change the points before the train was lowered was struck by the runaway tubs and fatally injured. Inspection and enquiry made.
156	23rd June, 10 A.M.	Khewra Mine, Khewra P. O., Punjab.	Government of India.	Barkhurdar, (*m.*), 55, *Haulage Attendant.*	Rocksalt	A loaded tub ran down from the brow of an incline and fatally injured deceased, who was working at the bottom of the incline. Inspection and enquiry made.

157	27th June, 2-15 A. M.	Mahakali Mine, Chanda P. O., C. P.	Aboobakar Abdul-rehman & Co.	*Chottu Gond, (m), 20, Coal-filler.*	*Coal*	*On the main haulage road of an incline, deceased was run over by an outgoing set of loaded tubs. He sustained fatal injuries and died within a few minutes. It is presumed that he met with the accident while attempting to cross the tram-line in front of the moving set. Inspection and enquiry made.*
158	7th July, 12-30 P. M.	Khewra Mine, Khewra P. O., Punjab.	Government of India.	Mohd. Akbar, (m.). 18, *Miner.*	Rocksalt	A loaded tub ran over the foot of deceased causing slight injuries. Tetanus supervened and he died ten days after the accident. Inspection and enquiry made.
159	23rd July, 12-15 P. M.	Datla Mine, Junnordeo P. O., C. P.	Amalgamated Coal-fields, Ltd.	(1) Bhano Ahiran, (f.), 24, (2) Mathri Ahiran, (f.), 22, *Tub-fillers.*	Coal	While a set of six loaded tubs was being hauled up an incline with a variable gradient, the rope broke and allowed the set to run back. The deceased were caught by the run-away tubs and fatally injured. Inspection and enquiry made.
160	26th July, 4 P. M.	Mathani Mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Ram Charan Mondal, (m). 30, *Trammer.*	Coal	While a set of loaded tubs was being hauled up an under-ground haulage road with a gradient of 1 in 6, the set became derailed at a curve by a sudden jerk on the rope. Deceased, who was riding on the set without authority, was thrown off and fatally injured. Inspection and enquiry made.
161	2nd August, 5-30 P. M.	Kargali Mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Makhni, (f.), 25, *Loader.*	Coal	While a tipping tub loaded with stones was being pushed along a tram-line on the top bench of a quarry it got derailed and tipped over. A piece of stone thrown from the tub rolled down from the top bench and fell on the head of deceased from a height of about 25 feet. She sustained injuries which proved fatal two days later. Inspection and enquiry made.
162	3rd August, 11-30 A. M.	Jamuria Mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ld.	Kisto Dass, (m), 52, *Tub-checker.*	Coal	While handshunting some loaded tubs a trammer left a loaded tub standing on an endless haulage road, dipping at 1 in 14. On bringing down the next tub, he and his companion bumped it so violently against the stationary tub that both the tubs ran downhill. The runaway tubs travelled a distance of about 125 feet and caught deceased, who was attempting to cross the line. He sustained injuries which proved fatal two days later. Inspection and enquiry made.
163	8th August, 2 P. M.	Loyabad Mine, Bansjora P. O., Bihar.	Barrakur Coal Co., Ld.	Narain Asai, (m), 38, *Labourer.*	Coal	While two trolleys carring long steel pipes were being lowered down a haulage road dipping at 1 in 4, the manila rope coupling the two trolleys ran amain. Deceased who was accompanying the trolleys was struck and seriously injured by the runaway trolley. He succumbed to the injuries six days later. If the trolleys had been coupled together by means of a stout chain the accident would have been avoided. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			HAULAGE—(*33 deaths.*)—*contd.*			
164	20th August, 5 P.M.	Samla Govindpur Mine, Pandaveswar P. O., Bengal.	Samla Gobindpur Collieries Co.	Kishore Passi, (*m.*), 30, *Underground Trammer.*	Coa	On a tram-line sloping at 1 in 12, deceased set a loaded tub in motion and then spragged its front wheel. This caused the tub to capsize and it caught deceased against the side of a pillar, killing him instantly. Inspection and enquiry made.
165	15th September, 10-40 A.M.	Mosaboni Mine, Ghatsila P. O., Bihar.	Indian Copper Corporation Limited.	John, (*m.*), 30, *Pump attendent.*	Copper	While an empty skip, weighing about 6 cwt., was about to be lowered in a sinking winze dipping at 30°, the rope broke inside the socket of the capping and the skip ran wild. Deceased, who was going down the winze, was struck by the runaway skip and killed instantly. Inspection and enquiry made.
166	1st October, 5-30 A.M.	Datla Mine, Junnordeo P. O., C. P.	Amalgamated Coalfields Ltd.	Nirpat Lodh, (*m.*), 30, *Trammer.*	Coal	While a trammer was lying asleep across a haulage road with a gradient of about 1 in 60, he was run over and killed by a loaded tub which gravitated unattended down the road. Inspection and enquiry made.
167	7th October, 9-0 A.M.	Kustore Mine, Kusunda P. O., Bihar.	The Raneegunge Coal Association Ld.	Puniram Bilaspuri, (*m*), 22, *Coal-cutter.*	Coal	While a miner was walking at the side of a level haulage road the first mine-car of a set of 8 loaded cars attached to an electric locomotive became derailed. He was knocked down and received internal injuries to which he succumbed 7 days later. Inspection and enquiry made.
168	19th October, 3-30 P.M.	Jaghir Mine, Salem P. O., Madras.	The Magnesite Syndicate Ltd.	Perumal Anaigoundan, (*m.*), 35, *Cooly.*	Magnesite	Deceased was knocked down by a trolley on a tram-line and sustained fatal injuries.
169	23rd October, 2-30. P.M.	Khewra Mine, Khewra P. O., Punjab.	Government of India.	Budha, (*m.*), 40, *Trammer.*	Rocksalt	Deceased was walking between two loaded tubs which were in motion. He was overtaken by the rear tub and was injured seriously. He succumbed to his injuries six days later. Inspection and enquiry made.

170	10th November, 6-35 P.M.	South Tisra Mine, Jharia P. O., Bihar.	South Tisra Colliery Co., Ltd.	Sibau Dosad, (*m.*), 30, *Hookman.*	*Coal*	*While a set of three full tubs was being hauled up a road rising at 1 in 4, the rope broke and the tubs ran amain. Deceased was struck and fatally injured by the runaway tubs. Inspection and enquiry made.*
171	21st November, 11-35 P.M.	Sitalpur Mine, Sitarampur P. O., Bengal.	Sitalpur Coal Co., Ltd.	Kalo Manjhi, (*m.*), 32, *Coal-cutter.*	Coal	While a set of ten empty tubs was being lowered down a gradient of 1 in 15, the leading four tubs became uncoupled and ran wild. They ran into a working level and killed deceased who was waiting there for empty tubs. Inspection and enquiry made.
172	22nd November, 5-30 P.M.	Bararee Mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Parbil Mahato, (*m.*), 38, *Coal-carrier.*	Coal	A set of ten empty tubs was being lowered into a roadway dipping at 1 in 4 when the first four tubs became derailed, the third tub dislodging a prop which fell and struck deceased, who was sitting down 20 feet away. He sustained injuries to which he succumbed a few hours later. Inspection and enquiry made.
173	6th December, 11-15 A.M.	Banksimula Mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Dukhu Panika, (*m.*), 37, *Loader.*	Coal	On a direct haulage road, dipping at 1 in 8, a trammer left an empty tub standing but neglected to sprag it properly. The tub ran wild and fatally struck deceased who was halting near the bottom of the plane. Inspection and enquiry made.
174	31st December, 12 Noon.	New Sudamdih Mine, Pathardi P. O., Bihar.	New Sudamdih Colliery Ltd.	Hari Ram Mahato, (*m.*), 30, *Tram-line repairer.*	Coal	A set of eight empty tubs, which apparently had not been coupled to the haulage rope, was being lowered over the brow of a haulage road when the tubs ran wild and fatally injured deceased who was working on the haulage road. Inspection and enquiry made.
			UNDERGROUND MACHINERY—(*1 death.*)			
175	20th February, 5 A.M.	Toposi Mine, Toposi P. O., Bengal.	Bansra Coal Co., Ld.	Bhabini Bourin, (*f.*), 45, *Bailer.*	Coal	Deceased was sleeping near a tram-line with her lamp extinguished. A coal-cutting machine was being brought along the tram-line and she was run over. She sustained injuries to which she subsequently succumbed. Inspection and inquiry made.
			SUNDRIES UNDERGROUND—(*21 deaths.*)			
176	1st January, 3-50 P.M.	Bokaro Mine, Bokaro P. O., Bihar.	E. I. R. and B. N. R.	Punoo Tanti, (*m.*), 45, *Coal-cutter.*	Coal	While attempting to climb down the steep side of a quarry deceased missed his foot-hold and fell through a distance of 25 feet. He sustained serious injuries which proved fatal shortly afterwards. Inspection and inquiry made.

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			SUNDRIES UNDERGROUND—(*21 deaths*) —*contd.*			
177	7th January, about 6-45 P.M.	Kustore Mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ld.	Ram Lal Bhakta, (*m.*), 40. (2) Foudi Kahar, (*m.*), 35, *Bunker-Trollymen.*	Coal	Five men were engaged in various duties in the vicinity of an underground loading bunker, when about 10 tons of coal which had jammed in the chute suddenly fell into the bunker. One end wall of the bunker collapsed and fell on the tram-line below killing two of the men instantly and seriously injuring the other three Inspection and enquiry made.
178	14th January, 5-30 A.M.	Kustore (Alkusa South Section) Mine, Kusunda P O., Bihar.	The Raneegunge Coal Association Ld.	Khiria Dosadin, (*f.*), 20, *Coal-carrier.*	Coal	In a depillaring area deceased was struck and killed instantly by a prop, 12 feet long, which was disloged by a large piece of coal that fell from the side of a pillar under extraction. Inspection and enquiry made.
179	22nd January, 3-15 P.M.	Bararee (Jealgora Section) Mine, Jealgora P. O., Bihar.	The East Indian Coal Co., Ld.	Diljan Meah, (*m.*), 17, *Loader.*	Coal	While dressing was proceeding after blasting in the side of a pillar under extraction, a mass of coal, weighing about 3 tons, fell and dislodged two props which on falling displaced a third prop. Deceased who was standing at a distance of 55 feet from the pillar was struck by the third prop and killed instantly. Inspection and enquiry made.
180	5th February, 5 A.M.	Jamadoba Mine, Jealgora P. O., Bihar.	The Tata Iron and Steel Co., Ld.	Santak Bilaspuri, (*m.*), 40, *Coal-cutter.*	Coal	While the side of a pillar in a depillaring area was being dressed, a mass of coal, weighing about 7 cwt., rolled against a prop and dislodged it. Deceased, who was standing not far from the prop, was struck by it and sustained injuries which proved fatal 10½ hours later. Inspection and enquiry made.
181	27th February, 9-30 P.M.	Bararee Mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ld.	1. Dhanu Singh, (*m.*), 35. 2 Rupan Hazam, (*m.*), 32, *Labourers.*	Coal	In a depillaring district of a seam 26 feet thick, props were being withdrawn, when without warning an area of roof measuring 280 feet × 200 feet collapsed causing an air blast. The deceased who had been engaged in withdrawing timber were proceeding to a "retreat station", when they were killed instantly by the force of the blast. Inspection and enquiry made.

182	11th March, 7-30 A.M.	Mosaboni Mine, Ghatsila P. O., Bihar.	Indian Copper Corporation, Ld.	Harekristo Nath, (*m.*), 35, *Coolie.*	Copper .	*While deceased was assisting to move a plank in a stope, a large piece of ore, weighing about 30 lbs. rolled down the slope and struck him on the head. He sustained injuries which proved fatal a few hours later. Inspection and enquiry made.*
183	3rd April, 7-20 P.M.	Benahir Mine, Jharia P. O., Bihar.	Standard Coal Co., Ld.	Motabaksh Chamar, (*m.*), 35, *Coal-cutter.*	Coal .	While deceased was dressing down roof coal with a crowbar from a ladder, he overbalanced and fell a distance of 20 feet. He sustained serious injuries to his head to which he succumbed almost immediately. Inspection and enquiry made.
184	3rd May, 10 A.M.	Jharia Khas Mine, Jharia P. O., Bihar.	The Standard Coal Co., Ld.	Dukhan Kuiri, (*m.*), 25, *Loader.*	Coal .	Previous to putting up more supports a timberman and his two assistants were testing the roof of a gallery, 26′ high, in a depillaring area when a mass of stone, 1′ 3″ × 1′ × 6″, fell from the roof and disloged a prop. Two loaders who had entered the gallery without the knowledge of the timbermen were struck by one end of the prop. One of the loaders received fatal injuries and the other was seriously injured. Inspection and enquiry made.
185	5th May, 9-45 P.M.	Lutchipur Mine, Sitarampur P. O., Bengal.	Lutchipur Coal Co.	Mahindi Kora, (*m.*), 45, *Stone-cutter.*	Coal .	While assisting to clear a road through a fall in a gallery underground, a miner was struck by a piece of stone, 4′ × 3′ × 1′ 6″, which rolled from the top of the fall, and fatally injured him. Inspection and enquiry made.
186	2nd July, 7 A.M.	Bejdih Mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Monu Turi, (*m.*), 48, *Coal-cutter.*	Coal .	While deceased was hand-shunting an empty tub on an underground tramming level, a thin piece of coal fell from the roof and struck the tub. In avoiding the falling coal deceased tripped over the tram-line and struck his head against a pillar, sustaining fatal injuries. Inspection and inquiry made.
187	26th July, 2 P.M.	Jamuria Mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Gobinda Khaira, (*m.*), 32, *Coal-cutter.*	Coal .	Under the supervision of a sirdar, deceased was dressing down roof stone, loosened by blasting when a piece, 7′ × 3′ × 2″ thick, broke away at a height of 14 feet. In attempting to get clear, he fell heavily on the blocks of coal lying on the floor and sustained internal injuries to which he succumbed two hours later. Inspection and enquiry made.
188	27th July, 1-40 P.M.	Shibrajpur Mine, Shivrajpur P. O., Bombay.	The Shivrajpur Syndicate Ltd.	Bewarie Manful, (*m.*), 35, *Miner.*	Manganese ore.	Deceased with a rope tied round his waist was assisting to lever down some loose rock about 60 feet from the bottom of a quarry when a piece of stone fell and cut the rope. He fell to the bottom of quarry and sustained fatal injuries.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			SUNDRIES UNDERGROUND—(*21 deaths*)—*concld.*			
189	30th July, 4 P.M.	Katras-Chaitodih Mine, Katrasgarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Indoo Gope, (*m.*), 26, *Labourer.*	Coal	Props were being withdrawn from a depillaring area in a seam 8 feet thick and when only four props remained, the local roof stone, 1′ thick, fell. One prop at the edge of the fall was dislodged and projected 31 feet along a gallery where it struck deceased and killed him instantly. Inspection and inquiry made.
190	13th August, 2-30 P.M.	Sodepur Mine, Sitarampur P. O., Bengal.	Bengal Coal Co., Ltd.	Khandu Bouri, (*m.*), 28, *Labourer.*	Coal	While assisting in sand packing operations, deceased slipped from a ladder, a distance of 8 feet, and struck his head against the floor of a gallery. He was seriously injured and died 10 hours later. Inspection and enquiry made.
191	20th August, 4 P.M.	Pandeberra Mine, Jharia P. O., Bihar.	Pandeberra Colliery Co.	Adu Roani, (*f.*), 45, *Stone-carrier.*	Coal	While at work in an open excavation deceased accidentally fell a distance of about 22 feet and sustained injuries which proved fatal six hours later. Inspection and inquiry made.
192	12th September, 5 P.M.	Kajora Mine. Kajoragram P. O., Bengal.	Roy Dutt & Co.	Fulu Roy, (*m.*), 29, *Coal-cutter.*	Coal	While deceased was standing on a ladder dressing down some overhanging coal from the corner of a pillar at a height of 12 feet, the crowbar slipped from his hands and he fell to the floor with the ladder. He sustained serious injuries to which he succumbed 52 hours later. Inspection and enquiry made.
193	22nd September, 1-30 A.M.	Bararee Mine, Jealgora P. O., Bihar.	The East Indian Coal Co., Ltd.	Narayan Bowri, (*m.*), 35, *Coal-cutter.*	Coal	While a miner was standing on a ladder testing the side of a pillar at a height of 24 feet he overbalanced and fell to the floor. He was killed instantly. Inspection and enquiry made.
194	8th November, 5-35 P.M.	South Kajama Mine, Jharia P. O., Bihar.	Bagdigi Kujama Colliery Co.	Muchiram Bouri, (*m.*), 35, *Pump-attendant.*	Coal	While deceased was walking to his pump he slipped and fell heavily. He died on the spot from heart failure. Inspection and enquiry made.

			BY SURFACE MACHINERY—(*1 death*).			
195	24th December, 5 45 P.M.	Orwad Mine, Udvada P. O., Bombay.	Narsibhai Muljibhai	Dhandoo Dagdoo, (*m.*), 35, *Labourer.*	Stone quarry.	The fly wheel of a stone crusher broke while in motion and a piece of the wheel struck deceased, inflicting fatal injuries.
			ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(*8 deaths*).			
196	12th March, 1-35 P.M,	Central Kirkend Mine, Kusunda P. O., Bihar.	Central Kirkend Coal Co., Ld.	Jokhan Nunia, (*m.*), 58, *Loading Coolie.*	Coal	While wagons were being hand-shunted on a railway siding, deceased attempted to pass between two wagons. He was crushed between the buffers and was fatally injured. Inspection and enquiry made.
197	22nd March, 5-20 P.M.	Shivrajpur Mine, Shivrajpur P. O., Bombay.	The Shivrajpur Syndicate Ltd.	Mukawa Timaya, (*f.*). 27, *Labourer.*	Manganese.	While walking along a tramline, deceased was overtaken and run over by a tub of ore being pushed by two miners. She sustained serious injuries and died seven days later. It was subseqently disclosed that she was deaf and dumb. Inspection and enquiry made.
198	14th April, 8 A.M.	Ghogri Mine, Junnordeo P. O., Central Provinces.	Sial Coal Co.	Bhimi Meharan, (*f.*), 17, *Loader.*	Coal	While attempting to ride on a moving train of tubs, deceased slipped and her legs were run over by the wheels of a tub. She succumbed to her injuries ten days later. Inspection and enquiry made.
199	14th April, 9 A.M.	Sudamdih Mine, Pathardihi P. O., Bihar.	New Sudamdih Collieries Ltd.	Jyoti Bauri, (*m.*), 30, *Trammer.*	Coal	Deceased was assisting to re-rail an empty tub when his left ring finger was pinched beneath the buffer and rail. He contracted tetanus and died seven days later. Inspection and enquiry made.
200	1st May, 12-30 P.M.	Serampur Mine, Giridih P. O., Bihar.	Govt. of India, State Railway Coal Department.	Mauka Dusad, (*m.*). 37, *Cooly.*	Coal	While walking alongside a moving train of empty wagons deceased was knocked down by it and sustained injuries which proved fatal a few hours later. Inspection and enquiry made.
201	25th September, 9 A.M.	Tirodi South Mine, Tirodi P. O., Central Provinces.	The Central Provinces Manganese Ore Co., Ld.	Bhaga, (*f.*), 45, *Tramline Worker.*	Manganese Ore.	Deceased was run over by a loaded tub on a surface tramline. She sustained serious injuries and died from septicemia three days later.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Cause of accident and remarks.
			ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(*8 deaths*)—*contd.*			
202	7th November, 7 A.M.	North Damuda Mine, Nudkhurkee P. O., Bihar.	Shanker Lall Agarwala.	Lotan Mahato, (*m.*), 62, *Carter.*	Coal	Deceased was standing on the front of a tipping tub filled with coal which was being hauled along a surface tramline by a buffalo and a bullock. He fell off the tub in between the rails and was injured. He died from shock 4 hours later. Inspection and enquiry made.
203	11th November, 3 P.M.	Makarwal Mine, Mari Indus P. O., Punjab.	Messrs. C. B. Petman and R. S. L. Isherdas Kapoor.	Adhrim, (*m.*), 25, *Labourer.*	Coal	A clamp of an aerial ropeway bucket got loose and the bucket ran wild on the ropeway, dipping 1 in 5. Deceased who happened to be in the bucket was thrown against the bottom terminal of the ropeway and was killed on the spot. Inspection and enquiry made.
			BY ELECTRICITY—(*2 deaths*).			
204	31st July, 11-50 A.M.	Jamadoba Mine, Jealgora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Dhaneswar Rowt, (*m.*), 22, *Labourer.*	Coal	Deceased touched a portable electric hand-lamp and received a severe electric shock from the metallic guard. He walked a few steps and somehow got entangled with the cable serving the lamp. He collapsed and expired after he was realised from the cable. Inspecton and inquiry made.
205	31st October, 12 Noon.	Sendra Mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Manna Zolla, (*m.*), 35, *Labourer.*	Coal	A fitter with deceased was re-making a joint on the top of a post which carried a steam range. On completion of the work his right arm came in contact with a 223 volt A. C. lighting line which was attached to the post. He received a continuous electric shocks for sometime and then fell 18 ft. to the ground. He was unconscious and expired soon afterwards. The accident would not have happened had the fitter taken the precaution to see that the lighting line was dead before work was commenced. Inspection and enquiry made.

MISCELLANEOUS ON SURFACE—
(3 deaths.)

206	1st December, 11-45 A. M.	Bokaro Mine, Bokaro P. O., Bihar.	East Indian and Bengal Nagpur Railways.	Bisahin Marari, (*f.*), 35, *Coal-loader.*	Coal	Deceased attempted to enter a quarry by an unauthorised path and while climbing down a slope of 1 in 1.4 she fell to the bottom and sustained fatal injuries. Inspection and enquiry made.
207	18th December, 8 A. M.	Kongon and Borjan Mine, Kougnyu P. O., Assam.	The Nazira Coal Co., Ltd.	Korom Singh, (*m.*), 35, *Labourer.*	Coal	Deceased was accidentally struck by a prop which fell a distance of 30 feet from a platform. He was fatally injured. Inspection and enquiry made.
208	30th December, 4-30 P. M.	Ramsilla Stone Mine, Gaya P. O., Bihar.	G. W. Powell and A. Ghanny.	Ram Saran Kol, (*m.*) 35, *Stone-breaker.*	Stone	While deceased was levering down stones from the slope of a hill, he overbalanced and fell 55 feet down to the foot of the hill. He died almost immediately. Inspection and enquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
			FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—*(24 deaths.)*				
1	3rd January, 12 Noon.	Teetulmari Mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd.	Gokul Rajwar, (*m.*), 60, *Not employed.*	Coal	Not a mining accident.	While grazing goats deceased fell into an abandoned quarry from a height of about 25 feet. Death was instantaneous. The quarry was fenced properly. Inspection and enquiry made.
2	31st January, 9 A. M.	Bhelwa Pahari Mine, Ganwan P. O., Bihar.	Ganga Saho . .	Prayag Sundi, (*m.*), 20, *Not employed.*	Coal	Not employed.	Deceased was found buried in an abandoned prospecting pit, about 8 feet in depth. Inspection and enquiry made.
3	7th February, 9-30 P. M.	Dhansar Mine, Jharia P. O., Bihar.	Dhansar Coal Co., Ltd.	Jamru Manjhi, (*m.*), 42, *Not employed.*	Coal	Not employed.	While deceased was crossing a surface tramline in the darkness he fell over a haulage rope which was in motion and sustained injuries which proved fatal. Inspection and enquiry made.
4	11th February, about 6-7 A. M.	Kustore Mine, Kusunda P. O., Bihar.	Raneegunge Coal Association Ltd.	Jugnarayan Tewary. (*m.*), about 22, *Label Peon.*	Coal	Not a mining accident.	Deceased, who was subject to epileptic fits, was found drowned in an open drain on the surface which contained water to a depth of about 2 feet Inspection and enquiry made.
5	23rd February, 6-30 P. M.	Chambal and Chanuwala Stone Quarries, Saraia-lamgir P. O., Punjab.	P. W. D. (Punjab), Irrigation Branch.	Ram Saran, (*m.*), 60, *Sirdar.*	Stone	Not a mining accident.	While returning home after the end of his work in a quarry, deceased fell down from a trolley and sustained injuries which proved fatal a short time after the accident. Inspection and enquiry made.
6	9th or 10th March.	Victoria Mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Runu Bibi, (*f.*), 30, *Not employed.*	Coal	Not employed.	Deceased was found dead at the bottom of a shaft, 319 feet deep. As the shaft was securely fenced it was assumed that she had either deliberately climbed through the fence and jumped down the shaft or she had been thrown down. Inspection and inquiry made.

7	22nd March, 11 A.M.	Patlabari Mine, Chirkunda, P. O., Bihar.	Shew Pujan Singh .	Chand Gope, (*m.*), 45, *Not employed.*	Coal .	Not employed.	While deceased was undermining coal in a disused quarry a mass of side, 7′ × 4′ × 2½′ thick, fell on him from a height of 5 feet killing him instantly. Inspection and enquiry made.
8	18th April, 10 A.M.	Upper Kandra Mine, Pathardih, P O., Bihar.	Upper Kandra South Jharia Coal Co.	Jaya Mahato, (*m.*), 65, *Not employed.*	Coal .	Not employed.	Deceased went to take a bath in a water-logged quarry and was drowned. Inspection and inquiry made.
9	9th May.	Lakurka Mine, Katrasgarh, P.O., Bihar.	Lakurka Coal Co., Ltd.	Lachmi Pathak, (*m.*), 30, *Not employed.*	Coal .	Not employed.	Deceased was drowned in an abandoned quarry, containing about 8 ft. of water. Inspection and enquiry made.
10	11th May, 7 A.M.	Victoria Mine, Kulti P.O., Bengal.	New Beerbhum Coal Co., Ltd.	Behary Singh, (*m.*), 40, *Timberman.*	Coal .	Not a mining accident.	While a boiler was being "blown down" a short piece of a retaining wall built over the inspection trap of the "blow down" pipe collapsed; and a large volume of steam was emitted from the trap door. Ten persons who were standing near were scalded and one subsequently succumbed to his burns. Inspection and enquiry made.
11	9th June, 6 P M.	Khas Govindpur Mine, Katrasgarh P.O., Bihar.	Khas Govindpur Coal Co.	Abdul Gani, (*m*), 28, *Not employed.*	Coal .	Not employed.	Deceased jumped into an abandoned quarry, containing about 6 ft. of water and was drowned. Inspection and enquiry made.
12	3rd July, 7-15 A.M.	Ramnagar Mine, Pandaveswar, P. O., Bengal.	Samla Collieries Ltd.	Fullo Manjhin, (*f.*), 11, *Not employed.*	Coal .	Not a mining accident.	In attempting to pass between two wagons during hand-shunting operations on a surface railway deceased was crushed between the buffers and killed instantly. Inspection and enquiry made.
13	7th July, 5 P.M.	Kargali Mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Raghunath, (*m.*), 55, *Recruiter.*	Coal .	Not a mining accident.	Deceased was killed by lightning. Inspection and inquiry made.
14	20th July, 7-0 A.M.	Bararee Mine, Jealgora P. O., Bihar.	East Indian Coal Co, Ltd.	Mongli Manjhin, (*f.*), 32, *Slack loader.*	Coal .	Not a mining accident.	Deceased was standing on the line in a colliery siding when wagons were being marshalled by a railway engine. She was knocked down and killed instantly. Inspection and enquiry made.
15	Probably 23rd July.	South East Baraboni Mine, Charanpur P. O., Bengal.	Maharaja S. C. Nandy.	Sahadev Mudi, (*m.*), 25, *Hawker.*	Coal .	Not a mining accident.	Deceased was found drowned in an abandoned trial-shaft, containing 60 feet of water. The shaft was properly fenced. Inspection and inquiry made.
16	3rd August about 5-30 P.M.	Madhabpur Mine, Ondal P. O., Bengal.	Chandanmull, Indra Kumar.	Petru Gope, (*f.*), 8, *Not employed.*	Coal .	Not employed.	Deceased was run over by a locomotive on a surface tramline. She sustained serious injuries and died the following day.

APPENDIX II—*contd.*

Fatal Accidents during the year 1937—*contd.*

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of persons killed.	Name of mineral worked.	Reason for exclusion.	Cause of accident and remarks.
			FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(*24 deaths*)—*contd.*				
17	5th October, 1-30 A.M.	Jamehari Selected Mines, Raniganj P. O., Bengal.	Jogmohan Kishorilal.	Khudu Manjhi, (*m.*), 42, *Fitter.*	Coal	Not a mining accident.	Deceased died of heart failure within 15 minutes of his going underground. Inspection and enquiry made.
18	27th October, 6 A.M.	Baruhi Limestone Mine, Banjari P. O., Bihar.	Ram Prashad Mehra.	Ghuria Doshadhin, (*f.*), 28, *Not employed.*	Limestone	Not employed.	Deceased was digging earth from an undercut side of an abandoned quarry when the side collapsed. She was struck by a mass of stone 1′ × 1′ 9″ and died instantly. Inspection and enquiry made.
19	3rd November, 4-30 P.M.	Madhabpur Mine, Ondal P. O., Bengal.	Chandanmull Indrakumar.	Kaloo, (*m.*), 22, *Coal-cutter.*	Coal	Not a mining accident.	During a fit of insanity deceased threw himself down a shaft 199 ft. deep and was killed instantly. Inspection and enquiry made.
20	13th November, 12-30 P.M.	Lakurka Mine, Katrasgarh P. O., Bihar.	Lakurka Coal Co., Ltd.	Dukhni Kole, (*f.*), 25, *Not employed.*	Coal	Not employed.	Deceased went to a boiler feed tank containing about 10 feet of water, for washing purposes and was drowned. Inspection and enquiry made.
21	25th November, 4-0 A.M.	Kurhurbaree Mine, Giridih P. O., Bihar.	The Government of India.	Tettoo Rai, (*m.*), 12, *Not employed.*	Coal	Not employed.	While a boy was warming himself near a heap of boiler ashes his clothing caught fire. He succumbed to his burns 16 days later. Inspection and enquiry made.
22	29th November, 11-45 P.M.	Bhulanbararee Mine, Pathardihi P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Situ Bouri, (*m.*), 35, *Coal-cutter.*	Coal	Not a mining accident.	Deceased was sitting near a fire in the compound of his dwelling, when his clothing caught fire. He sustained serious burns to which he succumbed the following day. Inspection and enquiry made.

23	20th December, 6·30 A.M.	Protoria Mine, Charanpur P. O., Bengal.	Seebpore Coal Co., Ltd.	Santi Bouria, (f.), 22, Attendant of an injured worker.	Coal	Not a mining accident.	While deceased was sitting near a fire on the verandah of her dwelling, her clothing caught fire, causing severe burns to her body. She died of shock 16 hours later. Inspection and enquiry made.
24	29th December, 12-15 A.M.	Kirkend Mine, Kusunda P. O., Bihar.	Kripashanker D. Worah.	Dukhni Kole, (f.), 18, Loader.	Coal	Not a mining accident.	During a cold night deceased was sleeping near a fire in her dwelling, when her clothing caught fire. She was severely burnt and died about 15 hours later. Inspection and enquiry made.

APPEN

Table

Statement of fatal and serious accidents in and about Mines

FATAL

Province.	District and Mineral field.	Number of separate fatal accidents.	Number of deaths.						
			Underground.		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	Total.
Assam	Khasi and Jaintia Hills	...	...	..	...	...	...	...	...
	Lakhimpur—Makum coalfield.	3	4	...	...	...	...	...	4
	Naga Hills—Nazira coalfield.	1	...	...	...	...	1	...	1
Bengal (and part of Bihar).	Raniganj coalfield .	51	54	4	...	...	...	...	58
Bihar	Jharia coalfield .	83	84	3	2	1	5	...	95
	Bokaro ,,	7	1	...	3	2	...	1	7
	Karanpura ,,	1	...	...	1	...	...	...	1
	Giridih ,,	6	7	...	...	...	1	..	8
Central Provinces	Betul . . .	1	3	...	...	...	...	...	3
	Chanda . . .	1	1	...	...	...	...	...	1
	Chhindwara—Pench Valley coalfield.	12	11	3	...	...	...	1	15
Orissa . . .	Sambalpur—Hingir-Rampur coalfield.	1	1	...	...	...	...	...	1
Punjab . . .	Salt Range coalfield .	5	5	...	...	...	1	...	6
	Total (Coal) .	172	171	10	6	3	8	2	200

DIX II.

No. 2.

regulated by the Indian Mines Act, during the year 1937.

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Under-ground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
AL															
...	...	...	...	1	2	...	...	...	...	...	2	95·24	...	...	50·00
8·30	...	...	2·25	93	90	...	..	...	3	1	94	74·32	...	7·39	52·96
...	...	11·11	3·62	...	...	...	...	...	...	...	...	...	...	...	...
1·50	...	...	1·00	218	175	8	...	1	36	7	227	4·74	0·98	2·36	3·93
2·01	0·51	0·20	1·28	279	219	6	3	...	55	4	287	5·20	0·51	2·35	3·87
0·40	0·75	0·40	0·60	44	15	...	16	4	8	2	45	5·93	2·98	4·05	3·84
..	0·70	...	0·29	14	9	...	1	...	4	...	14	7·49	0·70	4·65	4·01
1·48	...	0·40	1·30	80	74	1	...	...	5	...	80	15·88	...	3·51	12·98
61·22	...	...	28·62	...	...	...	...	...	...	...	...	...	...	...	...
0·52	...	...	0·40	9	7	...	...	...	2	...	9	3·67	...	3·49	3·62
2·28	...	0·37	1·61	41	36	...	...	...	8	...	44	5·87	...	2·97	4·73
4·20	...	...	3·10	...	...	...	...	...	...	...	...	...	...	...	...
3·36	...	1·13	2·50	14	6	...	...	...	8	...	14	4·03	...	9·04	5·83
1·77	0·58	0·19	1·17	793	633	15	20	5	129	14	816	6·34	1·61	2·68	4·77

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL							
		Number of separate fatal accidents.	Number of deaths.						
			Under-ground.		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	Total.
									IRON
Bihar	Singhbhum	2	...	...	2	...	...	...	2
									MANGA
Bombay	Panch Mahals	2	...	..	1	...	...	1	2
Central Provinces	Balaghat	3	1	...	1	...	...	1	3
	Bhandara	...	...	...	...	...	...	...	...
	Nagpur	...	...	...	...	...	...	...	...
	Total (Manganese)	5	1	...	2	...	...	2	5
									CHROMITE
Baluchistan	Upper Zhob	1	1	...	...	...	...	...	1
Bihar	Singhbhum	...	...	...	...	...	...	...	...
	Total (Chromite ore)	1	1	...	...	...	...	...	1

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1937—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Underground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
ORE															
...	0·25	..	0·18	9	...	...	1	...	8	...	9	...	0·12	2·81	0·83
NESE															
...	1·27	2·46	1·58	14	6	...	4	...	4	...	14	80·00	5·08	9·85	11·03
1·71	0·11	0·50	0·27	16	...	...	5	2	8	1	16	...	0·80	4·50	1·42
...	...	...	...	10	...	...	...	3	5	2	10	...	0·82	17·51	2·47
...	...	...	...	4	...	...	2	1	1	...	4	...	0·50	1·75	0·60
1·37	0·09	0·52	0·19	44	6	...	11	6	18	3	44	8·21	0·78	5·41	1·68
ORE															
9·09	...	...	1·99	2	1	...	1	...	...	...	2	9·09	4·37	...	3·98
...	...	...	...	1	...	...	1	1	...	...	2	...	2·23	...	2·14
9·09	...	...	0·68	3	1	...	2	1	...	...	4	9·09	2·59	...	2·72

APPEN

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field.	FATAL							
		Number of separate fatal accidents.	Number of deaths.						
			Underground.		Open workings.		Surface.		
			Males.	Females.	Males.	Females.	Males.	Females.	Total.
									COPPER
Bihar	Singhbhum	7	8	...	...	...	...	...	8
									MI
Bihar	Gaya	2	...	...	1	1	...	...	2
	Hazaribagh	3	2	...	4	...	...	...	6
	Manbhum	...	...	...	...	...	...	...	...
	Monghyr	1	1	...	...	...	...	...	1
Madras	Nellore	2	1	...	1	...	...	...	2
Rajputana	Ajmer-Marwara	1	...	...	1	...	...	...	1
	Total (Mica)	9	4	...	7	1	...	...	12
									SA
Punjab	Jhelum	4	4	...	...	...	...	...	4
	Mianwali	...	...	...	...	...	...	...	...
	Total (Salt)	4	4	...	...	...	...	...	4

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1937—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.												
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.				
					Underground.		Open workings.		Surface.							
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
ORE															
4·95	...	...	2·49	168	153	...	...	...	15	...	168	94·62	...	9·40	52·30
CA															
...	2·73	...	0·47	2	2	...	...	...	...	...	2	0·70	...	...	0·47
0·17	1·24	...	0·35	21	19	...	2	...	3	...	24	1·64	0·62	1·26	1·40
...	...	...	...	1	1	..	...	...	...	..	1	20·00	...	...	3·76
1·99	...	...	0·65	...	...	...	..	...	...	...	...	...	...	...	...
0·63	0·63	...	0·41	2	3	...	...	...	...	...	3	1·88	...	...	0·61
...	2·26	...	1·18	1	...	...	2	1	...	...	3	...	6·77	...	3·54
0·24	1·15	...	0·41	27	25	...	4	1	3	...	33	1·47	0·72	0·56	1·13
LT															
6·21	...	...	4·10	8	6	...	...	...	2	...	8	9·32	...	6·25	8·20
...	...	...	...	1	1	...	...	..	...	...	1	10·20	...	...	6·02
4·51	...	...	2·96	9	7	...	...	...	2	...	9	7·90	...	4·40	6·65

APPEN

Table

Statement of fatal and serious accidents in and about Mines

FATAL

Province.	District and Mineral field.	Number of separate fatal accidents.	Number of deaths.						
			Under-ground.		Open workings.		Surface.		Total.
			Males.	Females.	Males.	Females.	Males.	Females.	
									STO
Bihar	Gaya	1	...	...	...	...	1	...	1
	Santal Parganas	1	...	...	1	...	...	...	1
Bombay	Bombay Surbaban	...	...	...	...	...	...	...	...
	Surat	1	...	...	...	...	1	...	1
Madras	Chingleput	...	...	...	...	...	...	...	...
	East Godavari	1	...	...	1	...	...	...	1
	Total (Stone)	4	...	...	2	...	2	...	4
									LIME
Bihar	Shahabad	1	...	...	1	...	...	...	1
Central Provinces	Jubbulpore	1	...	...	7	2	...	..	9
Punjab	Attock	1	...	...	1	...	...	...	1
	Jhelum	...	...	...	...	...	...	...	...
	Total (Limestone)	3	...	...	9	2	...	...	11

DIX II—*contd.*

No. 2—*contd.*

regulated by the Indian Mines Act, during the year 1937—*contd.*

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Under-ground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
NE															
...	...	333·33	1·74	...	...	...	...	...	...	...	...	...	...	...	...
...	0·55	..	0·36	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	...	....	...	1	...	...	1	...	29·41	...	10·64
...	...	40·00	1·85	...	...	...	...	...	...	...	...	...	...	...	...
..	...	...	...	6	...	...	2	...	3	1	6	...	2·47	25·64	6·22
...	12·82	...	12·82	...	...	...	...	...	...	...	...	..	...	...	...
...	0·25	0·91	0·40	7	...	...	2	1	3	1	7	...	0·38	1·83	0·70
STONE															
..	0·57	...	0·39	5	...	...	3	1	1	...	5	...	2·28	1·23	1·95
...	2·36	...	2·21	14	...	...	9	1	4	...	14	...	2·62	15·50	3·44
...	2·60	...	2 60	2	...	...	2	...	...	...	2	...	5·20	...	5·20
...	...	...	...	1	...	...	...	...	1	...	1	...	...	142·86	20·83
...	1·57	...	1·30	22	...	...	14	2	6	...	22	...	2·14	4·91	2·60

APPEN

Table

Statement of fatal and serious accidents in and about Mines

FATAL

Province.	District and Mineral field.	Number of separate fatal accidents.	Number of deaths						
			Under-ground.		Open workings.		Surface.		Total.
			Males.	Females.	Males.	Females.	Males.	Females.	
									MAG
Madras	Salem	1	...	...	1	...	...	...	1
									CHINA
Bihar	Singhbhum . . .	...	...	...	...	...	...	...	...
	Grand Total (All minerals).	208	189	10	29	6	10	4	248

DIX II—*contd.*

No. 2—*concld.*

regulated by the Indian Mines Act, during the year 1937—*concld.*

ACCIDENTS.				SERIOUS ACCIDENTS.											
Death rate per 1,000 persons employed.				Number of separate serious accidents.	Number of persons seriously injured.							Serious injury rate per 1,000 persons employed.			
					Underground.		Open workings.		Surface.						
Underground.	Open workings.	Surface.	Underground, Open workings and Surface.		Males.	Females.	Males.	Females.	Males.	Females.	Total.	Underground.	Open workings.	Surface.	Underground, Open workings and Surface.
NESITE															
...	0·72	...	0·64	2	...	...	...	1	1	...	2	...	0·72	5·43	1·28
CLAY															
...	...	...	...	1	...	...	...	...	1	...	1	..	...	2·67	1·06
1·62	0 48	0·19	0·93	1,085	825	15	54	17	186	18	1,115	6 84	0·98	2·82	4·16

APPENDIX II—*concld.*

Table No. 3.

Statement of fatal accidents in Mines regulated by the Indian Mines Act, during the year 1937, classified according to cause of accident.

Mineral worked.	Number of separate accidents.	Number of persons killed.												Death rate per 1,000 persons employed.			
		Explosions and ignitions of fire-damp and coal dust.	Falls of roof.	Falls of sides.	In shafts.	Suffocation by gases.	By explosions.	By Irruptions of water.	Haulage.	Miscellaneous underground.	Electricity.	Surface.	Total deaths.	Underground.	Open workings.	Surface.	Open Underground, workings and Surface.
Coal	172	2	71	49	10	2	9	...	27	20	2	8	200	1·77	0·58	0·19	1·17
Iron Ore	2	...	...	1	...	...	1	...	...	...	...	...	2	...	0·25	...	0·18
Manganese Ore	5	...	1	1	...	...	...	...	...	1	...	2	5	1·37	0·09	0·52	0·19
Chromite Ore	1	...	...	1	...	...	...	...	...	...	...	...	1	9·09	...	...	0·68
Copper Ore	7	...	4	...	2	...	...	...	1	1	...	...	8	4·95	...	...	2·49
Mica	9	...	2	8	...	...	2	...	...	...	...	...	12	0·24	1·15	...	0·41
Salt	4	...	...	...	...	...	...	...	4	...	...	...	4	4·51	...	...	2·96
Stone	4	...	...	1	...	...	1	...	...	...	...	2	4	...	0·25	0·91	0·40
Limestone	3	...	...	9	...	...	2	...	...	...	...	...	11	...	1·57	...	1·30
Magnesite	1	..	...	...	...	...	...	...	1	...	...	...	1	...	0·72	...	0·64
Total for 1937	208	2	78	70	12	2	15	...	33	22	2	12	248	1·62	0·48	0·19	0·93
Total for preceding year.	214	213	67	74	7	35	12	...	25	19	3	22	477	3·17	0·53	0·37	1·77
Difference	—6	—211	+11	—4	+5	—33	+3	...	+8	+3	—1	—10	—229	—1·55	—0·05	—0·18	—0·84

APPENDIX III.

Statement of prosecutions under the Indian Mines Act, during the year 1937.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bengal	Burdwan	1	1	1	Section 15(1) and (2) of the Indian Mines Act, 1923, read with Regulation 23(a) made under the Act.	
	Do.	1	3	3	Regulation 4(b) of the regulations for prohibiting the employment of women underground in mines contained in Notification No. M.-1055, dated the 7th March 1929, issued by the Government of India, Department of Industries and Labour, Section 22 C(1) and (3) of the Indian Mines Act, 1923, and Regulation 149 of the Indian Coal Mines Regulations, 1926, and Bye-Law 95 made under Sections 29 and 32 of the Indian Mines Act, 1923.	
	Do.	1	2	2	Regulation 149 of the Indian Coal Mines Regulations, 1926, Bye-Law 95 made under Section 32 of the Indian Mines Act, 1923, and Section 25 B(3) of the same Act.	
	Do.	1	3	3	Regulation 149 of the Indian Coal Mines Regulations, 1926 and Bye-Law 95 made under Section 32 of the Indian Mines Act, 1923, and Regulation 4(b) of the Regulations for prohibiting the employment of women underground in mines issued under Notification No. M.-1055, dated the 7th March 1929 and No. M.-1055, dated the 1st February 1937, by the Government of India, Department of Industries and Labour.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bengal—*contd.*	Burdawn	1	3	3	Regulation 4 (b) of the Regulations for prohibiting the employment of women underground in mines contained in Notification No. M.-1055, dated the 7th March 1929, issued by the Government of India, Department of Industries and Labour, Regulation 149 of the Indian Coal Mines Regulations, 1926, read with Bye-Law 95 and Section 33 and Rule 35 made under Section 30 of the Indian Mines Act, 1923.	
	Do.	1	2	2	Regulation 149 of the Indian Coal Mines Regulations, 1926, and Bye-Law 95 made under Sections 29 and 32 of the Indian Mines Act, 1923, and Regulation 4(b) of the Regulations for prohibiting the employment of women underground in mines contained in Notification No. M.-1055, dated the 7th March 1929 issued by the Government of India, Department of Industries and Labour.	
	Do.	1	2	2	Regulation 149 of the Indian Coal Mines Regulations, 1926, and Bye-Law 95 made under Sections 29 and 32 of the Indian Mines Act, 1923, read with Regulation 3 of Notifications No. M. 1055, dated the 1st February 1937, and No. M.-1055, dated the 17th June 1937, respectively issued by the Government of India, Department of Industries and Labour.	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bengal—*concld.*	Burdwan	1	1	1	Regulations 3(3) of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Temporary Regulation 7 and Bye-Law 10 made under Section 32 of the Indian Mines Act, 1923.	
Bihar	Hazaribagh	1	2	1	Sections 15 and 28 (4) of the Indian Mines Act, 1923, and Regulations 20 and 41 of the Indian Metalliferous Mines Regulations, 1926.	One of the accused died.
	Manbhum	1	2	—	Regulations 82 and 84 of the Indian Coal Mines Regulations, 1926.	Accused could not be traced—case withdrawn.
	Do.	1	2	2	Regulations 102 and 105 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	—	Section 15 and Section 28(4) of the Indian Mines Act as amended by Act V of 1935, and Regulation 70 of the Indian Coal Mines Regulations, 1926.	Case with drawn.
	Do.	1	2	2	Regulation 4(*b*) of the Regulations issued under Notification No. M. 1055, dated the 7th March 1929 by the Government of India, Department of Industries and Labour and Rule 9A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, read with Regulation 149 of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum . .	1	1	1	Regulation 137(2) of the Indian Coal Mines Regulations, 1926 and Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. . .	1	2	2	Regulation 13(4) read with Rule 33 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, and Regulations 69 A, 69(2), 137 and 138(2) of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	1	1	Regulations 69(2) and 137 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	2	2	Regulation 69 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	2	2	Regulations 102 and 105 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	2	2	Regulation prohibiting the employment of women underground in mines, embodied in Government of India, Department of Industries and Labour, Notification No. M 1055, dated the 1st February 1937 read with Notification No. M 1055, dated the 17th June 1937 and Bye-Law 31 of the Bye-Laws for coal mines.	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum	1	3	3	Regulations prohibiting the employment of women underground in mines, embodied in Government of India, Department of Industries and Labour, Notification No. M 1055, dated the 1st February 1937, read with Notification No. M 1055, dated the 17th June 1937 and Regulation 149 of the Indian Coal Mines Regulations, 1926, read with Section 28(4) of the Indian Mines Act and Rule 9A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do.	1	2	1	Regulation 149 of the Indian Coal Mines Regulations, 1926, read with Section 28(4) of the Indian Mines Act, 1923 and Rule 9A of the Rules made by the Bihar Government under Section 30 of Indian Mines Act, 1923.	One of the accused was acquitted.
	Do.	1	2	—	Regulation 149 of the Indian Coal Mines Regulations, 1926, read with Rule 9A of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	Case withdrawn.
	Do.	1	3	3	Regulations prohibiting the employment of women underground in mines, embodied in Government of India Department of Industries and Labour, Notification No. M 1055, dated the 1st February 1937, read	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum—*contd.*				with Notification No. M 1055, dated the 17th June 1937, Section 28(4), read with Rule 9A of the rules made by the Bihar Government, Bye-Law 31 of the Bye-Laws for coal mines and Regulation 149 of the Indian Coal Mines Regulations, 1926, read with rule 9A of the rules made by the Bihar Government and Section 28(4) of the Indian Mines Act, 1923.	
	Do. . .	1	2	2	Regulations 15(3), 67 and 137 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	2	2	Regulations 138(1), 69(2), 15(3) and 15(4) of the Indian Coal Mines Regulations, 1926. Section 23E (1) of the Indian Mines Act, 1923, and Rules 8 and 9 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. . .	1	4	4	Regulation 69(2) of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	4	4	Regulation 149 of the Indian Coal Mines Regulations, 1926, read with Rule 9A of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 4(*b*) of the Government of India, Department of Industries and Labour, Notification No. M 1055, dated the 7th March 1929.	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum . .	1	3	3	Regulation 149 of the Indian Coal Mines Regulations, 1926, read with Section 28 of the Indian Mines Act, 1923, and Rule 9 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, and regulation 4 embodied in Government of India, Department of Industries and Labour, Notification No. M 1055, dated the 7th March 1929.	
	Do. . .	1	2	2	Orders under Section 19 (2) of the Indian Mines Act, 1923.	
	Do. . .	1	3	3	Regulations 24(3), 70(2) and 149 of the Indian Coal Mines Regulations, 1926, read with Bye-Law 95 made under Section 32 of the Indian Mines Act, 1923, and regulation 4(*b*) issued under Notification No. M 1055, dated the 7th March 1929 issued by the Government of India, Department of Industries and Labour.	
	Do. . .	1	4	4	Regulations 15(3) and 67, read with Regulations 69 and 137 of the Indian Coal Mines Regulations, 1926, and Section 23 B(1) of the Indian Mines Act, 1923.	
	Do. . .	1	3	3	Regulation 4(1) (*b*) of the Regulations for prohibiting the employment of women underground in mines embodied in Government of India, Department of Industries and Labour, Notfn. No. M 1055, dated the	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum—*contd.*				7th March 1929, read with Notification No. M 1055, dated the 17th June 1937, Section 22(*c*) (3) read with Section 23(*b*) (4) of the Indian Mines Act, 1923 and Regulation 149 of the Indian Coal Mines Regulations, 1926, read with Section 28(4) of the same act and Rule 9A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Santal Parganas.	1	3	3	Section 29 of the Indian Mines Act, 1923 and Regulations 102 and 103 of the Indian Coal Mines Regulation, 1926, read with Bye-Law 15 made under Section 30 of the Indian Mines Act, 1923.	
	Bhagalpur . .	1	2	—	Section 29(*j*), read with Notification No. M 1055, dated the 7th March 1929 issued by the Government of India, Department of Industries and Labour.	Both the accused were acquitted.
	Manbhum . .	1	1	1	Orders under Section 19(2), Section 15 and Section 26, read with Section 26A of the Indian Mines Act, 1923, Rule 9A of the rules made by the Bihar Government, under Section 30 of the Indian Mines Act, 1923, read with Regulation 149 of the Indian Coal Mines Regulations, 1926, and Regulation 4(*b*) of the regulations prohibiting employment of women underground	

APPENDIX III—*contd.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*contd.*	Manbhum—*contd.*				in mines issued under Government of India, Department of Industries and Labour, Notification No. M 1055, dated the 7th March 1929.	
	Do. . .	1	1	1	Orders under Section 19(2) of the Indian Mines Act, 1923.	
	Do. . .	1	3	3	Regulations 145 and 149 of the Indian Coal Mines Regulations, 1926, and Bye-Law 95 made under Sections 29 and 32 of the Indian Mines Act, 1923, and Regulation 4(*b*) of the regulations prohibiting the employment of women underground in mines contained in Notification No. M 1055, dated the 7th March 1929 of the Government of India, Department of Industries and Labour.	
	Do. . .	1	3	3	Section 29(*j*), read with Notification No. M 1055, dated the 7th March 1929 issued by the Government of India, Department of Industries and Labour, Regulation 24, read with Section 15 of the Indian Mines Act, 1923, and Regulation 70 of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	3	3	Regulation 4(*b*) of the regulations embodied in Notification No. M 1055, dated the 7th March 1929 read with Notification No. M 1055, dated the 17th June 1937 issued by the Government of India, Department of Industries and Labour, Regulations	

APPENDIX III—*concld.*

Statement of Prosecutions under the Indian Mines Act, during the year 1937—*concld.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	Remarks.
Bihar—*concld.*	Manbhum—*contd.*				139 and 149 of the Indian Coal Mines Regulations, 1926, read with Bye-Law 95 made under Section 32 of the Indian Mines Act, 1923, and Rule 9A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, and Bye-Law 31 of the Bye-Laws for coal mines made under the Act.	
	Do. . .	1	1	1	Regulation 3(3) of the Indian Coal Mines Regulations, 1926.	
Central Provinces—	Chhindwara .	1	3	1	Section 39 of the Indian Mines Act, 1923, read with Regulation 9 of the Indian Coal Mines Regulations, 1926.	Two of the accused were acquitted.
	Do. . .	1	1	1	Regulation 145 made under Section 39 of the Indian Mines Act, 1923.	
	Do. . .	1	1	1	Regulation 110 made under Section 29 of the Indian Mines Act, 1923.	
	Jubbulpur . .	1	2	2	Regulation 38 of the Indian Coal Mines Regulations, 1926, and Rule 37 made under the Indian Mines Act, 1923.	
Madras . .	Nellore . .	1	2	2	Regulations 84 and 91 of the Indian Coal Mines Regulations, 1926.	
		46	100	89		

APPENDIX IV.

Miscellaneous.

Statement No. 1.

LIST OF INSPECTION CIRCLE.

No. 1 Circle.	No. 2 Circle.
1. All mines in Baluchistan.	1. All mines in Assam.
2. All mines in Bihar except mines in the District of the Santhal Parganas and such mines in the District of Manbhum as lie east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.	2. All mines in Bengal.
3. All mines in Orissa.	3. Such mines in Bihar as lie in the District of the Santhal Parganas and in the District of Manbhum east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District.
4. All mines in the North-West Frontier Province.	4. All mines in Bombay.
All mines in the Punjab.	5. All mines in the Central Provinces.
All mines in Rajputana.	6. All mines in Madras.
All mines in the United Provinces.	

Statement No. 2.

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1937.

Certificates granted to holders of British certificates of competency.

(*a*) FIRST CLASS.

Name.	Number of Indian certificate.	Date of Indian certificate.	Number of British certificate.	Date of British certificate.
Moir, Alexander	383	18th January 1937 .	2752	21st July 1933.
Wainwright, George . . .	384	Ditto . .	2946	30th July 1936.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1937—*contd.*

Certificates granted to holders of British certificates of competency—*contd.*

(*a*) FIRST CLASS—*contd.*

Name.	Number of Indian certificate.	Date of Indian certificate.	Number of British certificate.	Date of British certificate.
Nragundkar, Satchidanand Keshav	385	27th January 1937	2898	2nd May 1935.
Lomax, James	386	Ditto . .	2844	8th February 1935.
Anderson, Donald . . .	387	21st April 1937 .	2899	14th February 1936.
Wright, William John . . .	388	16th November 1937	2326	25th January 1929.
Griffith, Kenneth . . .	389	Ditto . .	2767	26th January 1934.
Willis, William Stanley . .	390	Ditto . .	2527	13th February 1931.
Taylor, Mathew . . .	391	Ditto . .	2231	25th January 1929.
Engineer, Behram Hormasjee .	392	Ditto . .	2974	4th February 1937.

INDIAN CERTIFICATES.

(*a*) FIRST CLASS.

Name.	No. of certificate.	Date of certificate.	REMARKS.
Prasad, Dharmanath	255	21st April 1937.	
McCue, Neil Bertram	256	Ditto.	
Roy, Pratul Kumar	257	Ditto.	
Yasin, Mohammad	258	Ditto.	
Datta, Anilendra Nath	259	Ditto.	
Gupta, Pramod Chandra	260	Ditto.	
Mitra, Durga Prasanna	261	Ditto.	

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1937—*contd.*

INDIAN CERTIFICATES—*contd.*

(*b*) SECOND CLASS.

Name.	No. of certificate.	Date of certificate.	REMARKS.
Mukherjee, Chandra Sekhar	530	21st April 1937.	
Srinivasan, Govindswami	531	Ditto.	
Krishnan, Subhuswami Iyer Gopaln	532	Ditto.	
Chatterjee, Hemendra Nath	533	Ditto.	
Rogers, Clarence Arnold Joseph	534	Ditto.	
Bhatt, Hemant Kumar Krishnaprasad	535	Ditto.	
Ghosh, Bikash Chandra	536	Ditto.	
Tayab, Mohammed	537	Ditto.	
Ghose, Hari Charan	538	Ditto.	
Ghose, Hiran Kumar	539	Ditto.	
Chowdhury, Nagendra Mohan	540	Ditto.	
Burman, Kartic Chandra	541	Ditto.	
Adhikary, Bhupendra Nath	542	Ditto.	
Maity, Nilmoni	543	Ditto.	
Verma, Achyuta Nand	544	Ditto.	
Roy, Bibhuti Bhusan	545	Ditto.	
Rizvi, Saiyad Riyazul Hasan	546	Ditto.	
Paul, Manmatha Nath	547	Ditto.	
Dutt, Sudhanshu Kumar	548	Ditto.	
Ghatak, Hari Pada	549	Ditto.	
Gandhar, Ladli Prasad	550	Ditto.	
Banerjee, Ajit Kumar	551	Ditto.	

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No 2.—*concld.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1937—*concld.*

INDIAN CERTIFICATES—*contd.*

(*c*) SURVEYORS' CERTIFICATES.

Name.	No of certificate.	Date of certificate.	REMARKS.
Singh, Tirath	91	10th January 1938.	
Srinivasan, V.	92	Ditto.	
Claire, N. Singh	93	Ditto.	
Watcha, Fridoon Savaksha	94	Ditto.	
Sinha, Ram Rup	95	Ditto.	
Chaudhuri, Paresh Nath	96	Ditto.	
Samanta, Mukunda Madhab . . .	97	Ditto.	
Kerr, Amar Krishna	98	Ditto.	
Roy, Rajendra Kumar	99	Ditto.	

Statement No. 3.

New Delhi, the 27th January 1937.

No. M.-1055.—In exercise of the powers conferred by sections 29 and 31A of the Indian Mines Act, 1923 (IV of 1923), the Governor General in Council is pleased to make the following further amendments in the Supplementary Coal Mines (Temporary) Regulations, 1936, namely :—

In the said Regulations—

I. In regulation 3, for the words and figures " unless the explosive is one of the " Permitted Explosives " allowed to be used by any order under the Coal Mines Act, 1911 ", the words and figures " unless the explosive is a Permitted Explosive as defined in the Indian Coal Mines Regulations, 1926 " shall be substituted.

II. In regulation 5, for the words and figures " if the explosive used is not one of the " Permitted Explosives " allowed to be used by any order under the Coal Mines Act, 1911 ", the words and figures " if the explosive used is not a Permitted Explosive as defined in the Indian Coal Mines Regulations, 1926 " shall be substituted.

III. For regulation 6, the following regulation shall be substituted, namely :—

" 6 (*1*) When inflammable gas or any noxious gas is detected in any working place or any part of a mine, the occurrence shall be immediately reported to the manager, the place or part shall be immediately fenced off so as to prevent persons inadvertently entering it and steps shall be taken without delay to remove the gas by improving the ventilation.

(*2*) During the removal of such gas no naked light shall be used in the ventilating district in which the gas is detected and all persons, except those necessary for such removal, shall be withdrawn from the return side of the ventilating district unless the quantity of gas is, in the opinion of the manager, so small that such withdrawal of persons is unnecessary."

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4.

NOTIFICATION.

New Delhi, the 27th January 1937.

No. M.-1051.—In exercise of the powers conferred by sub-section (i) of section 46 of the Indian Mines Act, 1923 (IV of 1923), the Governor General in Council is pleased to direct that the following further amendments shall be made in Appendix I to the Schedule to the Notification of the Government of India in the Department of Industries and Labour, No. M.-1051, dated the 1st October 1935, namely :—

In the said Appendix—

I.—Under the head "(Bengal)".

(i) For the sub-head "Clay Mine" and the entry thereunder the following sub-head and entries shall be substituted, namely :—

"*Clay Mines*".

"1. Gopinathpur	Nirode Baran Roy	Durgapur	Asansol	Burdwan.
2. Ranigunj No. 1	Burn and Co., Ld.	Ronai	Do.	Do.
3. Ranigunj No. 2	Do.	Baktarnagar	Do.	Do.
4. Ranigunj No. 3	Do.	Ronai	Do.	Do."

(ii) To the entries under the sub-head "Fireclay Mines", the following entries shall be added, namely :—

"3. Dendua	D. N. Chaudry	Dendua	Asansol	Burdwan.
4. Dabor	Do.	Dabor	Do.	Do.
5. Sabanpur	Burn & Co., Ld.	Sabanpur	Do.	Do.
6. Sangramgarh	Kalyanji Lalji	Sangramgarh	Do.	Do.
7. Rangakanali	Someswar Ojha	Rangakanali	Do.	Do.
8. Lalbazar	Manda, Khandait & Co.	Lalbazar	Do.	Do.
9. Pahargora	Do.	Pahargora	Do.	Do."

II.—Under the head "(Bihar and Orissa)".

(i) For the heading "(Bihar and Orissa)" the following heading shall be substituted, namely :—

"*Bihar*";

(ii) to the entries under the sub-head "Stone Mines" the following entries shall be added, namely :—

"77. Saleempore	J. N. Mukherjee	Saleempore	Bhagalpur	Bhagalpur.
78. Manpur	G. W. Powell & A. Ghany.	Manpur	Gaya	Gaya.
79. Manpur	Maniruddin	Do.	Do.	Do.
80. Manpur	Jogeswar Ram	Do.	Do.	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

(ii)—*contd.*

81. Manpur	Seth Isser Dass	Manpure	Gaya	Gaya.
82. Manpur	Azimuddin Basant Lal	Do.	Do.	Do.
83. Pirpahar	Bengal and North-Western Railway.	Sukhurpar	Monghyr	Monghyr.
84. Girhinda	Melaram and Basantlal	Girhinda	Do.	Do.
85. Bodma	A. V. Sam	Bodma	Jamtara	Santhal Parganas.
86. Tinpahar	Chatterjee Shaw & Co.	Tinpahar	Rajmahal	Do.
87. Maharajpur (locally known as Sahibganj Block No. 1).	Birendra Nath Shah	Matijharna	Do.	Do.
88. Tinpahar	Seth Teomal	Tinpahar	Do.	Do."

(iii) For the sub-head "Fireclay Mine" and the entry thereunder the following sub-head and entries shall be substituted, namely :—

"*Fireclay Mine.*"

"1. Merrah	Bengal Coal Co., Ld.	Merrah	...	Manbhum.
2. Sangomohal	Bihar Firebricks & Potteries, Ld.	Sangomohal	Dhanbad	Do.
3. Chatabar	Do.	Chatabar	Do.	Do.
4. Rangamati	Burn & Co., Ld.	Rangamati	Do.	Do.
5. Gulfarbari	Do.	Gulfarbari	Do.	Do.
6. Mugma Birsingpur.	D. N. Chowdhury	Mugma Birsingpur.	Do.	Do.
7. Kapasara	Amir Ahmed Khan	Kapasara	Do.	Do.
8. Palasia	Alladad Khan	Palasia	Do.	Do.
9. Jograd	Dina Nath Gorai	Jograd	Do.	Do.
10. Kethardih	Haripada Goswami	Kethardih	Do.	Do."

III.—Under the head "(Bombay Presidency)", to the entries under the sub-head "Stone Mines" the following entries shall be added, namely :—

"31. Tamdi Khan	Lal Khan Imambhai	Tamdi	F. Ward	Town and Island of Bombay.
32. Sewree	Bhagat Sing Naji	Sewree	Do.	Do.
33. Tambdi Khan	Rasid Banoo Savakshaw Kapadia.	Do.	Do.	Do.
24. Tambdi Khan	Soloman M. Haskell	Do.	Do.	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

IV.—Under the head "(Burma)".

(i) For the sub-head "Limestone Mine" the following sub-head shall be substituted, namely :—

"*Limestone Mines*";

(ii) to the entries under the said sub-head the following entry shall be added, namely :—

"5. Kung-tong	Burma Corporation, Ltd.	Mile 26·9 Kung-tong.	Lashio	. .	North Hsenwi State (Northern Shan States)."

V.—To the entries under the head "(Central Provinces)" the following sub-head and entries shal be added, namely :—

"*Bauxite Mines*";

"1. Tikuri	K. P. Pandey	Tikuri	Murwara	. .	Jubbulpur.
2. Tikuri	C. L. Pathak & Sons	Do	Do.	. .	Do."

VI.—Under the head "(Madras Presidency)".

(i) Under the sub-head "Stone Mines" for entries 16 and 17 the following entries shall be substituted, namely :—

"16. Molagupparai	Military Department	Trichinopoly Town.	Trichinopoly	.	Trichinopoly
17. Mogalrajpuram	Government of Madras, Works Department.	Mogalrajpuram	Bazwada Taluk	.	Kista.
18. Pakkam	South Indian Railway	Pakkam	Madurantakam Taluk.		Chinglepūt."

(ii) Under the sub-head "Barytes Mines" :—

(*a*) in the second column for the word "Kothapalli" the following shall be substituted namely :—

"*Kothapalli S. No. 288*";

(*b*) after entry 3 the following shall be inserted, namely :—

"4. Vemula (S. No. 981-5-978 and 979).	A. Krishnappa and Sons.	Vemula	Palivēndla Taluk.		Cuddapah.
5. Nendipalli	Do.	Kothapalli (S. No. 517-2 and 517-3).	Do.	. .	Do.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*concld.*

6. Vemula (S. No. 981-4).	Tiffin & Co.	. . .	Vemula	. .	Palivendla Taluk.	Cuddapah.
7. Vemula (S. No. 1021).	Do.	. . .	Do.	. .	Do.	Do."

"*Limestone Mine*";

"1. Madukharai	. Coimbatore Co., Ld.	Cement	Madukharai	. Coimbatore	. Coimbatore."

VII.—Under the head "Punjab" to the entries under the sub-head "Stone Mine" the following entry shall be added, namely:—

"6. Gharibwal (Jutana North Western Railway quarry).		Jutana	. . . . .	Pind Dadan Khan.	Jhelum."

VIII.—Under the head "(United Provinces)".

(i) For the sub-head "Stone Mines" the following sub-head shall be substituted, namely:—

"*Stone Mines*";

(ii) to the entry under the said sub-head the following entries shall be added, namely:—

"2. Shankergarh	. Sheikh Hidayatullah	. Tala	. .	Allahabad	. Allahabad.
3. Shankergarh	. Jothanand . . .	Do.	. .	Do.	. . Do.
4. Shankergarh	. Govindram Sindhi	. Benipur	. .	Do.	. . Do.
5. Shankergarh	. Pars Ram . . .	Shankergarh	.	Do.	. . Do.
6. Hajitola (Shankergarh).	Govindram Sindhi	. Hajitola	. .	Do.	. . Do.
7. Lakhanpur (Shankergarh).	L. P. Pandey & Sons	. Lakhanpur	.	Do.	. . Do.
8. Kulmajra	. . Pars Ram . . .	Kulmajra	. .	Maw	. . Banda.
9. Kulmajra	. . Bhagwandin . .	Do.	. .	Do.	. . Do.
10. Sheora	. . Nazir Hussain . .	Gulpura	. .	Jhansi-Math	. Jhansi.
11. Sheora	. . Ram Harak . . .	Do.	. .	Do.	. . Do.
12. Sheora	. . Ram Charan and Ram Gopal.	Tari	. . .	Do.	. . Do.
13. Sheora	. . Debi Sahai and Kali Charan.	Do.	. .	Do.	. . Do.
14. Sheora	. . Murlidhar and Tek Chand.	Do.	. .	Do.	. . Do.
15. Chandpur Jahazpur.	Randhir Singh . .	Chandpur Jahazpur.		Lalitpur	. . Do.
16. Chandpur Jahazpur.	Shiam Lal Tara Chand & Co.	Jhilgawan	.	Do.	. . Do."

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 5.

NOTIFICATION.

New Delhi, the 30th January 1937.

No. M.-966.—In exercise of the powers conferred by sections 29 and 31A of the Indian Mines Act, 1923 (IV of 1923), the Governor General in Council is pleased to make the following further temporary regulations, having satisfied himself that for the prevention of apprehended danger or the speedy remedy of conditions likely to cause danger it is necessary in making these regulations to dispense with the delay that would result from their previous publication and reference to Mining Boards :—

Temporary Regulations for Coal Mines.

1. (*1*) These regulations may be called the Coal Mines (Temporary) Regulations, 1937.

(*2*) They shall apply only in respect of coal mines.

2. In these regulations, " the principal Regulations " mean the Indian Coal Mines Regulations, 1926.

3. (*1*) The first inspection of a mine or part of a mine which is re-opened after a discontinuance of mining for a period exceeding seven days and the inspection of a mine which is in the process of being dewatered, shall be made by a person possessing the qualifications prescribed in sub-regulation (*1*) of Regulation 71 of the principal Regulations with a locked flame safety lamp of a type approved by the Chief Inspector.

(*2*) No additional light shall be used in any such inpection other than an electric torch or lamp of a type approved by the Chief Inspector.

(*3*) The result of every such inspection shall be reported by the person making it in the manner required by sub-regulation (*5*) of regulation 70 of the principal Regulations and shall be recorded in the book maintained in accordance with sub-regulation (*2*) of regulation 70 of the principal Regulations.

4. The principal Regulations shall be read as if for sub-regulation (*4*) of regulation 70 the following sub-regulation were substituted, namely :—

" (*4*) The inspection shall be made with a locked flame safety lamp of a type approved by the Chief Inspector, and no additional light shall be used other than an electric torch or lamp of a type approved by the Chief Inspector.

Provided that in the case of a mine in which inflammable gas has never been found and is unlikely to be found the inspection may be made with any electric torch or lamp if it is used in conjunction with an open light or a locked flame safety lamp. "

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 6.

NOTIFICATION.

New Delhi, the 1st February 1937.

No. M.-1055.—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Governor General in Council is pleased to make the following regulations, which have been previously published as required by sub-section (*1*) of section 31 of the said Act, namely :—

Regulations for prohibiting the employment of women underground in mines.

1. On or after the 1st day of July 1937, no woman shall be permitted to enter for purposes of employment, or be employed in, the underground workings of any mine.

Explanation.—" Underground workings " means any part of a mine situated beneath the superjacent ground, and includes vertical shafts provided for access to, or for the ventilation of such part; but does not include tunnels made and used only for convenience in disposing of spoil.

2. Regulation 1 shall not apply to women employed in health and welfare services.

3. No woman shall be permitted to enter or remain in the underground workings of any mine unless she is in possession of a pass granted by the manager of the mine.

4. Before a woman enters a mine with a pass granted under regulation 3, her name, address and occupation shall be entered in a register maintained for this purpose at the surface of the mine, and her exit from the mine shall also be recorded in that register.

Provided that in any mine to which sub-section (*4*) of section 28 of the Indian Mines Act, 1923 (IV of 1923), has been declared to be applicable, the entries required by this regulation may be made in the register prescribed by that sub-section.

Statement No. 7.

NOTIFICATION.

New Delhi, the 25th February 1937.

No. M.-1055.—In exercise of the powers conferred by sub-section (*1*) of section 46 of the Indian Mines Act, 1923 (IV of 1923), the Governor General in Council is pleased to direct that the following further amendments shall be made in the Schedule to the notification of the Government of India in the Department of Industries and Labour, No. M.-1051, dated the 1st October 1935, namely :—

In the said Schedule—

I. In column 3 against entry 1, after condition (2) the following condition shall be inserted, namely :—

" (3) The owner, agent or manager of any mine so exempted shall not permit any female to enter for purposes of employment, or be employed in the underground workings, if any, of the mine. "

II. In column 3 against entries 4 and 9 the following condition shall be inserted, namely :—

" The owner, agent or manager of any mine so exempted shall not permit any female to enter for purposes of employment, or be employed in the underground workings, if any, of the mine."

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 8.

The 13th March 1937.

No. 453—VIIM-7/37-Com.—In exercise of the powers conferred by clause (*a*) of section 30 of the Indian Mines Act, 1923 (IV of 1923), the Government of Bihar are pleased to make the following rules :—

A.—Mining Board for Coal Mines.

1. Of the two members to be nominated under section 10(1)(*d*) :—

(*a*) One shall be nominated by the Indian Mining Association, and

(*b*) One shall be nominated as the result of an election held by an electoral college consisting of the members of the Indian Mining Federation and the Indian Colliery Owners' Association. At such election no member of the electoral college shall have more than one vote.

2. Two members shall be nominated under section 10(1)(*c*), to represent the interest of miners, in the following manner :—

(*a*) If the registered trade unions in the province of Bihar have in the aggregate as members not less than one quarter of the miners employed in the province, the said registered trade unions shall nominate two persons to represent the interest of miners.

(*b*) If the registered trade unions in the province of Bihar have in the aggregate as members less than one quarter of the miners employed in the province, but not less than 1,000 the said registered trade unions shall nominate one person to represent the interest of the miners, and the local Government shall nominate the other person.

(*c*) If the registered trade unions in the province have in the aggregate less than 1,000 members, the local Government shall nominate both persons.

(*d*) If the registered trade unions are unable to agree as to what person or persons shall be nominated under part (*a*) or (*b*) of this rule, the local Government shall for each vacancy, call on one registered trade union to nominate a person in the following order :—

(1) The Indian Colliery Labour Union,

(2) The Tata's Colliery Labour Association,

(3) The Indian Miners' Association,

and this rotation shall be observed for all subsequent vacancies.

3. A person nominated under section 10 (1)(*d*) or 10(1)(*c*) shall hold office for a period of two years from the date of the notification appointing him to be a member of the Board.

4. The Chairman of the Board shall be authorised to accept the resignation of any member who is unable or unwilling to serve on the Board.

5. As soon as may be on the occurrence of a vacancy or before it, if possible, the Chairman shall inform the local Government, so that the vacancy may be filled. A retiring member shall be eligible for renomination.

6. *Absence from India* :—

(*i*) Before a member of the Board leaves India,

(*a*) he shall intimate to the Chairman the date of his departure and the date of his expected return to India, and

(*b*) if he intends to be absent from India for a longer period than six months, he shall tender his resignation to the Chairman.

(*ii*) If any member leaves India without taking either of the courses mentioned in sub-rule (*i*) he shall be deemed to have resigned, with effect from the date of his departure from India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 8—*contd.*

7. The Board shall meet at such places and at such times as may be appointed by the Chairman.

8. The Secretary shall conduct all the correspondence of Board, keep its accounts and record the proceedings of each meeting in a minute book, kept for permanent record. The record shall be signed by the Chairman.

9. The Secretary shall give due notice to the members of the Mining Board of the date fixed for each meeting, and shall furnish each with the agenda of the business to be discussed.

10. A quorum of the Board shall consist of—

(*a*) the Chairman;

(*b*) the Chief Inspector or an Inspector of Mines appointed under section 10(1)(*b*);

(*c*) one person nominated under section 10(1)(*d*);

(*d*) one person nominated under section 10(1)(*e*).

11. All questions or matters referred to the Board shall be decided by a majority of the votes of the members present.

12. The Chairman of the Board shall have a deliberative vote, and shall also in the case of an equal division have a casting vote.

13. Any member disagreeing with a decision of the Board may enter a note of dissent which shall form part of the record of the proceedings.

14. The Board shall have the power of consulting with such person or persons as they may in their discretion desire to consult.

15. It shall be open to the parties to any reference before the Board to appear at the hearing either in person or by solicitor or counsel or agent.

16. Unless otherwise directed by the Chairman the proceedings of the Board shall be held in private.

B.—Mining Board for Mines other than Coal Mines.

1. Of the two members to be nominated under section 10(1)(*d*):—

(*a*) One shall be nominated by the Indian Mining Association, and

(*b*) One shall be nominated as the result of an election held by an electoral college consisting of the members of the Indian Mining Federation and the Indian Colliery Owners' Association. At such election no member of the electoral college shall have more than one vote.

2. Two members shall be nominated under section 10(1)(*e*), to represent the interest of miners, in the following manner:—

(*a*) If the registered trade unions in the province of Bihar have in the aggregate as members not less than one quarter of the miners employed in the province, the said registered trade unions shall nominate two persons to represent the interest of miners.

(*b*) If the registered trade unions in the province of Bihar have in the aggregate as members less than one quarter of the miners employed in the province, but not less than 1,000 the said registered trade unions shall nominate one person to represent the interest of the miners and the local Government shall nominate the other person.

(*c*) If the registered trade unions in the province have in the aggregate less than 1,000 members the local Government shall nominate both persons.

(*d*) If there are two or more registered trade unions, and they are unable to agree as to what person or persons shall be nominated by them under part (*a*) or (*b*) of this rule, the local Government shall call on each registered trade union in turn to nominate a person to fill a vacancy, and the local Government shall decide the order in which such trade unions shall be placed for this purpose, and shall inform the trade unions concerned of such decision.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 8—*concld.*

3. A person nominated under section 10(1)(*d*) or 10(1)(*e*) shall hold office for a period of two years from the date of the notification appointing him to be a member of the Board.

4. The Chairman of the Board shall be authorised to accept the resignation of any member who is unable or unwilling to serve on the Board.

5. As soon as may be on the occurrence of a vacancy or before it, if possible, the Chairman shall inform the local Government, so that the vacancy may be filled. A retiring member shall be eligible for renomination.

6. *Absence from India* :—

(*i*) Before a member of the Board leaves India—

(*a*) he shall intimate to the Chairman the date of his departure and the date of his expected return to India, and

(*b*) if he intends to be absent from India for a longer period than six months, he shall tender his resignation to the Chairman.

(*ii*) If any member leaves India without taking either of the courses mentioned in sub-rule (*i*), he shall be deemed to have resigned with effect from the date of his departure from India.

7. The Board shall meet at such places and at such times as may be appointed by the Chairman.

8. The Secretary shall conduct all the correspondence of the Board, keep its accounts and record the proceedings of each meeting in a minute book, kept for permanent record. The record shall be signed by the Chairman.

9. The Secretary shall give due notice to the members of the Mining Board of the date fixed for each meeting, and shall furnish each with the agenda of the business to be discussed.

10. A quorum of the Board shall consist of—

(*a*) the Chairman;

(*b*) the Chief Inspector or an Inspector of Mines appointed under section 10(1)(*b*);

(*c*) one person nominated under section 10(1)(*d*);

(*d*) one person nominated under section 10(1)(*e*).

11. All questions or matters referred to the Board shall be decided by a majority of the votes of the members present.

12. The Chairman of the Board shall have a deliberative vote, and shall also in the case of an equal division have a casting vote.

13. Any member disagreeing with a decision of the Board may enter a note of dissent which shall form part of the proceedings.

14. The Board shall have the power of consulting with such person or persons as they may in their discretion desireto consult.

15. It shall be open to the parties to any reference before the Board to appear at the hearing either in person or by solicitor or counsel or agent.

16. Unless otherwise directed by the Chairman, the proceedings of the Board shall be hold in private.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 9.

NOTIFICATION.

Simla, the 17th June 1937.

No. M.-1055.—In exercise of the powers conferred by section 46 of the Indian Mines Act, 1923 (IV of 1923), the Central Government are pleased to exempt for a period of three months from 1st July 1937 all coal mines in Bengal, Bihar, the Central Provinces and Orissa from the Provisions of clause (*j*) of section 29 of the said Act, to the extent to which regulations made thereunder prohibit the entry of women into underground workings for purposes of employment. This exemption is subject to the condition that the total number of women employed in the undergound workings of any mine on any day shall not exceed 5 per cent. of the total number of persons so employed.

Statement No. 10.

NCTIFICATION.

Simla, the 10th July 1937.

No. M.-966.—In exercise of the powers conferred by sections 29 and 31A of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to make the following further temporary regulations, being satisfied that for the prevention of apprehended danger or the speedy remedy of conditions likely to cause danger it is necessary in making these regulations to dispense with the delay that would result from their previous publication and reference to Mining Boards :—

Temporary Regulations for Coal Mines.

1. (*1*) These regulations may be called the Supplementary Coal Mines (Temporary) Regulations, 1937.

(*2*) They shall apply only in respect of coal mines.

2. In these regulations, "the principal Regulations" mean the Indian Coal Mines Regulation, 1926.

3. (*1*) The Chief Inspector may require the manager of any mine in which, or in any part of which, a mechanical ventilator is in use, to submit within one month Standing Orders specifying the action that shall be taken with respect to the withdrawal of workmen from such mine or such part of the mine in the event of a stoppage of the mechanical ventilator.

(*2*) The Chief Inspector may approve of such Standing Orders or may modify them if, in his opinion, they are defective in any respect, and shall give notice in writing to the manager that such Standing Orders as are approved by him shall be enforced at the mine.

(*3*) On receipt of the notice from the Chief Inspector the manager shall post the Standing Orders in conspicuous places at the mine both above and below ground and shall be responsible for securing effective compliance with them.

4. (*1*) In any mine in which inflammable gas has been found during the previous twelve months, all unused workings in which inflammable gas may accumulate and which are not permanently sealed off, shall, at least once in every week, be inspected for the presence of inflammable gas, by the competent person appointed under regulation 70 of the principal Regulations.

(*2*) The inspection shall be made with a locked flame safety lamp of a type approved by the Chief Inspector, and no additional light shall be used, other than an electric torch or lamp of a type approved by the Chief Inspector.

(*3*) The result of every such inspection shall be reported by the person making it in the manner required by sub-regulation (*5*) of regulation 70 of the principal Regulations and shall be recorded in the book maintained in accordance with sub-regulation (*2*) of that regulation.

(*4*) Nothing in this regulation shall be construed to affect the provisions of regulation 70 of the principal Regulations.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 10—*contd.*

5. (*1*) In every mine or part of a mine in which the use of safety lamps is for the time being required in pursuance of regulation 1923 of the principal Regulations, a competent person appointed in writing, by the manager for the purpose, shall search all persons employed below ground immediately before they enter the mine or part for the purpose of ascertaining whether they have in their possession any match, smoking apparatus, or any apparatus of any kind for striking a light except within a completely closed chamber attached to the fuse of a shot.

(*2*) The person conducting the search shall :—

(*a*) search or turn out all pockets;

(*b*) pass his hand over all clothing; and

(*c*) examine any article in the workman's possession.

(*3*) If the person conducting the search suspects that the person searched is concealing any article of the nature described in sub-regulation (*1*), he shall detain him and as soon as possible refer the matter to the manager, or other official authorised by the manager for the purpose, who shall not allow such person to enter the mine until he is satisfied that the person has no such article in his possession.

6. (*1*) Without prejudice to the provisions of regulation 127 of the principal Regulations, the manager, or a competent officia l other than the persons referred to in clauses (*a*) and (*b*) of the said regulation, as modified by regulation 8 of these regulations], appointed in writing by the manager for the purpose, shall examine thoroughly all safety lamps in use at a mine at least once in every week, and shall record the result of his examination in a book kept at the mine for the purpose.

(*2*) If any lamp is found to be defective, it shall not be reissued for use until the defect has been remedied.

7. (*1*) A competent person appointed in writing by the manager for the purpose shall examine every safety lamp on its being returned, after use underground.

(*2*) If on such examination any lamp is found to be damaged or misused, he shall record the nature of the damage or misuse in a book to be kept at the mine for the purpose; and every new entry in the book shall be shown to the manager without delay.

8. The principal Regulations shall be read as if for clause (*b*) of regulation 127, the following clause were substituted, namely :—

"(*b*) (*i*) A competent person appointed in writing by the manager for the purpose shall examine every safety lamp at the surface immediately before it is taken underground for use and shall assure himself, as far as practicable, from external observation that each lamp is in safe working order and securely locked.

(*ii*) The competent person referred to in sub-clause (*i*) shall not be the banksman except in a mine where the number of persons employed underground is not more than 50 at any one time."

Statement No. 11.

PRESS *COMMUNIQUÉ.*

Simla, the 10th September 1937.

Regulations under the Indian Mines Act providing for the complete exclusion of women from employment underground were issued on 1st February last. They were intended to come into effect on 1st July, but exclusion was postponed for three months in respect of coal mines in Bengal, Bihar, the Central Provinces and Orissa. The Government of India have decided to grant no further extension, and the regulations will accordingly come into full operation on the 1st of October.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12.

NOTIFICATION.

Nagpur, the 25th January 1937.

No. 227-3314-XIII of 35.—In exercise of the powers conferred by section 30 of the Indian Mines Act, 1923 (IV of 1923), as subsequently amended, the Governor in Council is pleased to make the following amendments to the Central Provinces Regulation and Inspection of Mines Rules, 1924, published under the Central Provinces Gazette Notification No. 2226-1820-XIII, dated the 24th September 1924 (as subsequently amended) :—

Amendments.

1. For rule 3, the following rule shall be substituted, namely :—

"3. The persons nominated under section 10 (1) (*c*), section 10 (1) (*e*) (ii) and section 10 (1) (*e*) (iii) shall be such persons as the Local Government may select.

2. For rule 5 the following rule shall be substituted, namely :—

"5. A person nominated under section 10 (1) (*c*), section 10 (1) (*d*) or section 10 (1) (*e*) shall hold office for a term of three years from the date of the notification appointing him as a member of the Board :

Provided that an outgoing member shall continue in office until the appointment of his successors is notified ; and

Provided further that the Local Government may, by notification, at any time terminate the term of office of a person nominated by it as a member of the Board under the provisions of section 10 (1) (*e*) in order to replace him by a person nominated by a trade union or trade unions in the prescribed manner under the said provisions."

3. In the heading of Chapter II, for the words "Court of Inquiry", the words "Accidents and Court of Inquiry", and for the word, figures and letter "section 30 (*b*)", the words, figures and letters "section 30 (*aa*) and (*b*)" shall be substituted.

4. In Chapter II, the following rule shall be inserted as rule 19, and present rules 19 and 19-A shall be renumbered as rules 19-A and 19-B, respectively : –

"19. If the Local Government has, by notification, directed that accidents of the kind referred to in section 20 (2) occurring in or about any mines shall be entered in a register, the same shall be entered in a register to be maintained in Form G called the Register of Minor Accidents :

Provided that this rule shall not apply to accidents involving any injury which does not result in the enforced absence from work of the person injured for a period exceeding seven days."

5. In the heading under Chapter V for the words, figures and letters "section 30 (*cc*), (*d*), (*f*) and (*k*)" the words, figures and letters "section 30 (*cc*), (*d*), (*e*), (*ee*), (*f*) and (*k*)" shall be substituted.

6. For rule 29, the following revised rule shall be substituted, namely :—

"29. The register of all persons employed in the mine prescribed by section 28 (1) shall be maintained in Form A-1 at the office of the mine. It shall show all changes, excluding merely temporary or casual changes, in the nature of employment of each person."

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*contd.*

NOTIFICATION—*contd.*

Nagpur, the 25th January 1937—contd.

7. After rule 29-B, the following new rule shall be inserted, namely :—

"29-C. For every mine to which the provisions of section 28 (4) are applied by the Local Government by general or special order, there shall be kept at the office of the mine a register in Form A-2 of persons working below ground in the mine."

8. After rule 31, the following rule shall be inserted, namely :—

"31-A. Before any person who has not completed his seventeenth year is employed underground, the manager shall arrange to have him examined by a qualified medical practitioner and if after examination the medical practitioner is of opinion that such person is fit for employment underground, he shall grant him a certificate in Form H.

31-B. (1) Every certificate granted by a qualified medical practitioner shall be prepared by filling up the foil and counterfoil on both of which shall be impressed the left thumb mark of the person in whose name the certificate is granted.

(2) The qualified medical practitioner shall when satisfied, as to the correctness of the entries made therein, sign the foil and initial the counterfoil, and shall deliver the foil to the manager for safe custody.

(3) No certificate granted under rule 31-A shall be valid for a period exceeding twelve months. Every person in respect of whom a certificate of fitness has been issued shall be re-examined within twelve months of the last previous examination unless in the mean time he has completed his seventeenth year and the qualified medical practitioner making such re-examination may renew the certificate for a further period not exceeding twelve months or may suspend or revoke the said certificate.

(4) A qualified medical practitioner who refuses to grant a certificate referred to in rule 31-A or suspends or revokes an existing certificate under rule 31-B (3) shall state the reasons for refusing to grant a certificate or for suspending or revoking the certificate as the case may be. If the manager of the mine disagrees with the opinion of such medical practitioner, he may refer the case to the Chief Inspector or Inspector. The Chief Inspector or the Inspector shall refer the case for decision to a second qualified medical practitioner and such decision shall be final.

(5) Every person who has been certified as fit for employment underground shall before he is so employed be provided by the manager with a metal token. Such token shall be stamped with the letter "P" and numbered. The number shall be the same as that of the certificate of fitness.

(6) A record of every token so issued and the person to whom it was issued shall be maintained in the office of the mine.

(7) Certificates prescribed by clause (*a*) of section 26-A may be granted by a mine medical officer who is declared to be a qualified medical practitioner."

9. For the existing forms "A-1, A-2, E and F" the accompanying revised forms "A-1, A-2, E and F" shall be substituted.

10. After form "F" the accompanying forms "G and H" shall be inserted.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*contd.*

FORM A-1.

(RULE 29.)

Register of work-persons employed in mines (both on surface and underground). [*Sections 28 (1) and 30 (f) and (k) of the Indian Mines Act, 1923, as amended.*]

Name of mine.....

Name of owner.....

Serial No.	Name of worker with father's name and caste.	Age.	Sex.	Nature of his employment.	Periods of work fixed for him.		Intervals of rest, if any, to which he is entitled.		The days of rest to which he is entitled.
					Begins a.m./ p.m.	Ends. a.m./ p.m.	Begins a.m./ p.m.	Ends a.m./ p.m.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

APPENDIX IV—*contd.*

Miscellaneous —*contd.*

Statement No. 12—*contd.*

FORM A-2.

(RULE 29-C.)

Register of persons working below ground in respect of all coal mines and other mines having underground workings, to which provisions of section 28 (d) of the Indian Mines Act, have been made applicable by a general or special order of the Local Government.

(Persons entering the mine shall be shown by a × in the column marked "In" against the name.)

(Persons leaving the mine shall be shown by a × in the column marked "Out" against the name.)

(All entries shall be made in ink).

Period of work commences at p.m./a.m.

Period of work ends at p.m./a.m.

For week commencing and ending

Serial No. of form A-I.	Sunday.		Monday,		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.	
	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.

Total number of persons underground—

Total number of women underground—

Percentage of persons below ground who are women—

Signature of Register Keeper.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*contd.*

FORM E.

(RULE 29-B FOR MINES WITH NO RELAY SYSTEM.)

Notice of commencement of work, commencement of rest interval, end of rest interval and end of work as required by section 23-B (1) of the Indian Mines Act.

Name of mine.....

Name of owner of mine.....

It is hereby notified that persons employed in this mine shall begin their work, take rest intervals and end their work at the hours set out below :—

Kind of worker.	Beginning of work.	Commencement of rest interval.	End of rest interval.	End of work.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*contd.*

FORM F.

(RULE 29-B FOR MINES WORKED BY A SYSTEM OF RELAYS.)

Notice of commencement of work, commencement of rest interval, end of rest interval and end of work.

Name of mine_____

Name of owner of mine_____

It is hereby notified that persons employed in this mine shall begin their relays of work, take rest intervals and end their relays of work between the hours set out below:—

	FIRST RELAY.				SECOND RELAY.				THIRD RELAY.			
	Beginning of relay.	Commencement of rest interval.	End of rest interval.	End of relay.	Beginning of relay.	Commencement of rest interval.	End of rest interval.	End of relay.	Beginning of relay.	Commencement of rest interval.	End of rest interval.	End of relay.
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.

NOTE.—The work of persons employed below ground is to be reckoned from the time such persons leave the surface of the mine to the time when they finally return thereto at the end of relay of work.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*contd.*

FORM G.

Register of minor accidents in coal mines only. [*Sections 20 (2) and 30 (aa) of the Indian Mines Act and rule 19 of the Central Provinces Regulation and Inspection of Mines Rules, 1924, as amended.*]

Name of mine———————————

Date of the entry.	Date of the accident.	Name of the person injured.	Nature of work.	Nature of injury.	Nature of accident.	Duration of enforced absence from work.	Signature of Manager.
1	2	3	4	5	6	7	8

NOTE.—A copy of the entries should be sent by the owner, agent or manager of the mine within fourteen days after 30th June and 31st December in each year to the Chief Inspector of Mines in India, Dhanbad.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 12—*concld.*

FORM H.

[RULE 13-A.]

Certificate of fitness to work.

1. Serial No. _____

2. Date _____

3. Name _____

4. Father's name _____

5. Sex and caste or religion _____

6. Residence _____

7. Age _____

8. Physical fitness _____

9. Distinction of marks _____

10. Reasons for—

(*a*) Refusal of certificate _____

_____

(*b*) Cetificate being revoked _____

_____

Left hand thumb impression.

Initial of the qualified medical practitioner.

NOTE.—Exact details of cause of physical disability should be clearly stated.

Serial No. _____

Date _____

I hereby certify that I have personally examined (name) _____

_____

$\frac{\text{son}}{\text{daughter}}$ of _____

caste _____

resident of _____

_____

who is desirous of being employed in a mine and that $\frac{\text{his}}{\text{her}}$ age as nearly as can be ascertained from my examination, is _____ years and that $\frac{\text{he}}{\text{she}}$ is fit for employment in a mine. $\frac{\text{His}}{\text{Her}}$ description marks are _____

_____

Left hand thumb impression.

Signature of the qualified medical practitioner.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13.

NOTIFICATION.

Nagpur, the 25th January 1937.

No. 228-3314-XIII of 36.—In exercise of the powers conferred by section 30 of the Indian Mines Act, 1923 (IV of 1923), as applied to Berar, as subsequently amended, the Governor in Council is pleased to make the following amendments to the Berar Regulation and Inspection of Mines Rules, 1924, published with the Central Provinces Gazette Notification No. 2227-1820-XIII, dated the 24th September 1924 (as subsequently amended) :—

Amendments.

1. In the headings of Chapter I, for the words "Court of Inquiry", the words "Accidents and Court of Inquiry", and for the word, figures and letter "section 30(*b*)", the words, figures and letters "section 30(*aa*) and (*b*)" shall be substituted.

2. In Chapter I the following rule shall be inserted as rule 1, and present rules 1 and 1-A shall be renumbered as rules 1-A and 1-B, respectively :—

"1. If the Local Government has, by notification, directed that accidents of the kind referred to in section 20(2) occurring in or about any mines shall be entered in a register, the same shall be entered in a register to be maintained in Form G called the Register of Minor Accidents :

Provided that this rule shall not apply to accidents involving any injury which does not result in the enforced absence from work of the person injured for a period exceeding seven days".

3. In the heading under Chapter IV for the words, figures and letters "section 30(*cc*), (*d*), (*f*) and (*k*)" the words, figures and letters "section 30(*cc*), (*d*), (*e*), (*ee*), (*f*) and (*k*)" shall be substituted.

4. For rule 11, the following revised rule shall be substituted, namely :—

"11. The register of all person employed in the mine prescribed by section 28(1) shall be maintained in Form A-1 at the office of the mine. It shall show all changes, excluding merely temporary or casual changes, in the nature of employment of each person".

5. After rule 11-B, the following new rule shall be inserted, namely :—

"11-C. For every mine to which the provisions of section 28(4) are applied by the Local Government by general or special order, there shall be kept at the office of the mine a register in Form A-2 of persons working below ground in the mine".

6. After rule 13, the following rules shall be inserted, namely :—

"13-A. Certificates prescribed by section 26-A of the Act shall be granted in Form H. The forms shall be kept in a bound book in foil and counterfoil and numbered consecutively.

13-B. Before any person who has not completed his seventeenth year is employed underground, the manager shall arrange to have him examined by a qualified medical practitioner and, if after examination the medical practitioner is of opinion that such person is fit for employment underground, he shall grant him a certificate in the Form in Schedule D.

13-C. (1) Every certificate granted by a qualified medical practitioner shall be prepared by filling up the foil and counterfoil on both of which shall be impressed the left thumb-mark of the person in whose name the certificate is granted.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13—*contd.*

NOTIFICATION—*contd.*

Nagpur, the 25th January, 1937—contd.

(2) The qualified medical practitioner shall, when satisfied as to the correctness of the entries made therein, sign the foil and initial the counterfoil, and shall deliver the foil to the manager for safe custody.

(3) No certificate granted under rule 13-B shall be valid for a period exceeding twelve months. Every person in respect of whom a certificate of fitness has been issued shall be re-examined within twelve months of the last previous examination unless in the meantime he has completed his seventeenth year and the qualified medical practitioner making such re-examination may renew the certificate for a further period not exceeding twelve months or may suspend or revoke the said certificate.

(4) A qualified medical practitioner who refuses to grant a certificate referred to in rule 13-B or suspends or revokes an existing certificate under rule 13-B (3) shall state the reasons for refusing to grant a certificate or for suspending or revoking the certificate as the case may be. If the manager of the mine disagrees with the opinion of such medical practitioner, he may refer the case to the Chief Inspector or Inspector. The Chief Inspector or the Inspector shall refer the case for decision to a second qualified medical practitioner and such decision shall be final.

(5) Every person who has been certified as fit for employment underground shall before he is so employed be provided by the manager with a metal token. Such token shall be stamped with the letter "P" and numbered. The number shall be the same as that of the certificate of fitness.

(6) A record of every token so issued and the person to whom it was issued shall be maintained in the office of the mine.

(7) Certificate prescribed by clause (*a*) of section 26-A may be granted by a mine medical officer who is declared to be a qualified medical practitioner".

7. For the existing forms "A-1, A-2, E and F" the accompanying revised forms "A-1, A-2, E and F" shall be substituted.

8. After form "F" the accompanying forms "G and H" shall be inserted.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13—*contd.*

FORM A-1.

(RULE 11).

Register of work persons employed in mines (both on surface and underground) [sections 28(1) and 30(f) and (k) of the Indian Mines Act, 1923, as amended.]

Name of mine_____

Name of owner_____

Serial No.	Name of worker with father's name and caste.	Age.	Sex.	Nature of his employment.	Periods of work fixed for him.		Intervals of rest if any, to which he is entitled.		The days of rest to which he is entitled.
					Begins A.M./P.M.	Ends A.M./P.M.	Begins A.M./P.M.	Ends A.M./P.M.	
1	2	3	4	5	6	7	8	9	10

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13—*contd.*

FORM A-2.

(RULE 11-C.)

Registering of persons working below ground in respect of all coal mines and other mines having under ground workings, to which provisions of section 28(4) of the Indian Mines Act, have been made applicable by a general or special order of the Local Government..

(Persons entering the mine shall be shown by a × in the column marked "In" against the name.)

(Persons leaving the mine shall be shown by a × in the column marked "Out" against the name.)

(All entries shall be made in ink.)

Period of work commences at P.M./A.M.

Period of work ends at P.M./A.M

For week commencing and ending

Serial No. of form A-I.	Sunday.		Monday.		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.	
	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.

Total number of persons underground—

Total number of women underground—

Percentage of persons below ground who are women—

Signature of Register Keeper.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13—*contd.*

FORM E.

(RULE 11-B FOR MINES WITH NO RELAY SYSTEM).

Notice of commencement of work, commencement of rest interval, end of rest interval and end of work as required by section 23-B (1) of the Indian Mines Act.

Name of mine.....

Name of owner of mine.....

It is hereby notified that persons employed in this mine shall begin their work, take rest intervals and end their work at the hours set out below :—

Kind of worker.	Beginning of work.	Commencement of rest interval.	End of rest interval.	End of work.

APPENDIX IV—contd.

Miscellaneous—*contd.*

Statement No. 13—*contd.*

FORM F.

(RULE 11-B FOR MINES WORKED BY A SYSTEM OF RELAYS.)

Notice of commencement of work, commencement of rest interval, end of rest interval and end of work.

Name of mine_____

Name of owner of mine_____

It is hereby notified that persons employed in this mine shall begin their relays of work, take rest intervals and end their relays of work between the hours set out below :—

	FIRST RELAY.				SECOND RELAY.				THIRD RELAY.			
	Beginning of relay.	Commencement of rest interval.	End of rest interval.	End of relay.	Beginning of relay.	Commencement of rest interval.	End of rest interval.	End of relay.	Beginning of relay.	Commencement of rest interval.	End of rest interval.	End of relay.
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.

NOTE.—The work of persons employed below ground is to be reckoned from the time such persons leave the surface of the mine to the time when they finally return thereto at the end of relay or work.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13—*contd.*

FORM G.

Register of minor accidents in coal mines only. [*Sections 20(2) and 30 (aa) of the Indian Mines Act and rule 11 of the Berar Regulation and Inspection of Mines Rules, 1924, as amended.*]

Name of mine.....

Date of the entry.	Date of the accident.	Name of the person injured.	Nature of work.	Nature of injury.	Nature of accident.	Duration of enforced absence from work.	Signature of manager.
1	2	3	4	5	6	7	8

NOTE.—A copy of the entries should be sent by the owner, agent or manager of the mine within fourteen days after 30th June and 31st December in each year to the Chief Inspector of Mines in India, Dhanbad.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 13—*concld.*

FORM H.

[RULE 13-A.]

Certificate of fitness to work.

1. Serial No._____

2. Date_____

3. Name_____

4. Father's name_____

5. Sex and caste or religion_____

6. Residence_____

7. Age_____

8. Physical fitness_____

9. Distinction of marks_____

10. Reasons for—

(*a*) Refusal of certificate_____

_____

(*b*) Certificate being revoked_____

_____

Left hand thumb impression.

Initial of the qualified medical practitioner.

Serial No._____

Date_____

I hereby certify that I have personally examined (name)_____

_____

$\frac{\text{son}}{\text{daughter}}$ of_____

caste_____

resident of_____

_____

who is desirous of being employed in a mine and that $\frac{\text{his}}{\text{her}}$ age, as nearly as can be ascertained from my examination, is_____ years, and that $\frac{\text{he}}{\text{she}}$ is fit for employment in a mine. $\frac{\text{His}}{\text{Her}}$ description marks are_____

_____

Left hand thumb impression.

NOTE.—Exact details of cause of physical disability should be clearly stated.

Signature of the qualified medical practitioner.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14.

NOTIFICATION.

15th July 1937.

No. 5800—1 M-5/1937-Com.—In exercise of the powers conferred by section 30 of the Indian Mines Act, 1923 (IV of 1923), read with sub-paragraph (2) of paragraph 8 of the India and Burma (Transitory Provision) Order, 1937, the Government of Orissa are pleased to direct that the following amendments shall be made to the rules for coal mines and the rules for mines other than coal mines, published with Bihar and Orissa Government, Notification No. 2608—VIIM-2-Com., dated the 8th September 1924, and which are in force in the areas transferred from the late Bihar and Orissa Province to the Province of Orissa :—

Amendments in the Rules for Coal Mines.

1. In Chapter III of the rules for coal mines—

(*a*) For rule 9, the following rule shall be substituted :—

> 9. The register of all persons employed in the mine shall be maintained, as required by sub-section (*1*) of section 28 of the Act, in the form shown in Schedule A. The register shall be kept at the office of the mine.

(*b*) For rule 9-A, the following rule shall be substituted :—

> 9-A. The register required by sub-section (*4*) of section 28 of the Act shall be maintained in the form shown in Schedule F and all entries therein shall be made at the entrance or entrances to the mine and at the time when the person against whose name the entries are made entered or left the mine. The register shall be kept at the entrance of the mine.

(*c*) After rule 11, the following rule shall be inserted as rule 11-A :—

> 11-A. The register of accidents referred to in sub-section (*2*) of section 20 of the Act shall be in the form shown in Schedule D.

2. After Chapter VI of the rules for coal mines, the following new Chapter VI-A shall be inserted and the rules in Chapter VII renumbered 30 to 34 : —

CHAPTER VI-A.

Certificate of fitness for employment underground af persons who have not completed 17 years of age.

23. Before any person who has not completed his seventeenth year is employed underground, the manager shall arrange to have him examined by a qualified medical practitioner and, if after examination the medical practitioner is of opinion that such person is fit for employment underground, he shall grant him a certificate in the Form in Schedule E.

24. Every certificate granted by a qualified medical practitioner shall be prepared by filling up the foil and counterfoil on both of which shall be impressed the left thumb mark of the person in whose name the certificate is granted.

25. The qualified medical practitioner shall, when satisfied as to the correctness of the entries made therein, sign the foil and initial the counterfoil, and shall deliver the foil to the manager for safe custody.

26. No certificate granted under rule 23 shall be valid for a period exceeding twelve months. Every person in respect of whom a certificate of fitness has been issued shall be re-examined within twelve months of the last previous examination unless in the meantime he has completed his seventeenth year and the qualified medical practitioner making such re-examination may renew the certificate for a further period not exceeding twelve months or may suspend or revoke the said certificate.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

CHAPTER VI-A—*contd.*

27. A qualified medical practitioner who refuses to grant a certificate referred to in rule 23 or suspends or revokes an existing certificate under rule 26 shall state the reasons for refusing to grant a certificate or for suspending or revoking the certificate as the case may be. If the manager of the mine disagrees with the opinion of such medical practitioner, he may refer the case to the Chief Inspector or Inspector. The Chief Inspector or the Inspector shall refer the case for decision to a second qualified medical practitioner and such decision shall be final.

28. Every person who has been certified as fit for employment underground shall before he is so employed be provided by the manager with a metal token. Such token shall be stamped with the letter "P" and numbered. The number shall be the same as that of the certificate of fitness.

29. A record of every token so issued and the person to whom it was issued shall be maintained in the office of the mine.

30. In the rule for coal mines—

(*a*) For the existing Schedule A, the following Schedule shall be substituted :—

SCHEDULE A.

(*See* Rule 9.)

Register of employees.

Name and caste of the employee.	Age.	Sex.	Nature of employment.	Date of commencement of employment.	Periods of work.		Intervals for rest to which he/she is entitled.		Days of rest to which he/she is entitled.	Relay* to which he/she belongs.
					Begins.	Ends.	Begins.	Ends.		
					A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.		

*In mines where work is carried on by a system of relays.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

(*b*) For the existing Schedule C the following Schedule shall be substituted :—

SCHEDULE C.

(*See* RULE 9-B.)

Notice of commencement and end of work.

Name of mine.....

Name of owner of mine.....

It is hereby notified that persons employed in this mine shall begin and end their periods of work between the hours set out below :—

Kind of worker.	1st relay.				2nd relay, if any.				3rd relay, if any.			
	Period of work.		Rest interval.		Period of work.		Rest interval.		Period of work.		Rest interval.	
	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.
	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.

Note.—The words and letters not wanted should be scored out.

In the case of underground workers, the entry in the rest interval column will be *nil*.

(*c*) After Schedule C the following Schedules shall be added :—

SCHEDULE D.

(*See* Rule 11-A.)

Register of minor Accidents.

Date of entry.	Date of accident.	Name of persons injured.	Nature of work.	Nature of injury.	Nature of accident.	Duration of enforced absence from work.	Signature of Manager.
1	2	3	4	5	6	7	8

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

SCHEDULE E.

(*See* RULE 23.)

Form of certificate of fitness for employment underground in a mine.

Counterfoil of certificate of fitness.	Certificate of fitness.
Serial No.	Serial No. .....
Date.....	Date.....
	This certificate unless renewed shall not be valid
2. Name	after .....*
	I hereby certify that I have personally examined
3. Father's name.....	(name) ....
	....
4. Sex and caste or religion	son/daughter of.....
	(caste, etc.).....
....	residing at .....
	who is desirous of being employed in a mine and that
5. Residence	his/her age as nearly as can be ascertained from my
	examination is .....
6. Age certified	years and that he/she is fit for employment under-
	ground in a mine as an adult. His/Her descriptive
7. Distinctive marks	marks are..... .....
.....	.....
Left thumb impression.	Left thumb impression.
....	....
Qualified Medical Practitioner.	Qualified Medical Practitioner.
	Renewed till ....
	Date..... .....
	Signature of qualified medical practitioner.

*Date twelve months after date of issue to be filled in by the medical practitioner.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

SCHEDULE F.

(*See* RULE 9-A.)

Register of persons employed underground.

(Persons entering the mine shall be shown by a X in the column marked "In" against the name.)

(Persons leaving the mine shall be shown by a X in the column marked "Out" against the name.)
(All entries shall be made in ink.)

Period of work commences at $\frac{\text{p.m.}}{\text{a.m.}}$

Period of work ends at $\frac{\text{p.m.}}{\text{a.m.}}$

For week commencing and ending

Name of person.	Sex.	Nature of work.	Sunday.		Monday.		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.	
			In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.

Total number of persons underground—

Total number of women underground—

Percentage of persons below ground who are women—

Signature of Register-keeper.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

AMENDMENTS IN THE RULES FOR MINES OTHER THAN COAL MINES.

4. In Chapter III of the rules for mines other than coal mines for rule 9 the following rule shall be substituted :—

9. The register of all persons employed in the mine shall be maintained, as required by sub-section (*1*) of section 28 of the Act, in the form shown in Schedule A. The register shall be kept at the office of the mine.

5. After Chapter V of the rules for mines other than coal mines the following new Chapter V-A shall be added and the rules 17 to 21 in Chapter VI renumbered as rules 24 to 28 :—

CHAPTER V-A.

Certificate of fitness for employment underground of persons who have not completed 17 years of age.

17. Before any person who has not completed his seventeenth year is employed underground, the manager shall arrange to have him examined by a qualified medical practitioner and if after examination the medical practitioner is of opinion that such person is fit for employment underground he shall grant him a certificate in the Form in Schedule D.

18. Every certificate granted by a qualified medical practitioner shall be prepared by filling of the foil and counterfoil on both which shall be impressed the left thumb mark of the person in whose name the certificate is granted.

19. The qualified medical practitioner shall, when satisfied as to the correctness of the entries made therein, sign the foil and initial the counterfoil, and shall deliver the foil to the manager for safe custody.

20. No certificate granted under rule 17 shall be valid for a period exceeding twelve months. Every person in respect of whom a certificate of fitness has been issued shall be re-examined within twelve months of the last previous examination unless in the meantime he has completed his seventeenth year and the qualified medical practitioner making such re-examination may renew the certificate for a further period not exceeding twelve months or may suspend or revoke the said certificate.

21. A qualified medical practitioner who refuses to grant a certificate referred to in rule 17 or suspends or revokes an existing certificate under rule 20 shall state the reasons for refusing to grant a certificate or for suspending or revoking the certificate as the case may be. If the manager of the mine disagrees with the opinion of such medical practitioner, he may refer the case to the Chief Inspector or Inspector. The Chief Inspector or the Inspector shall refer the case for decision to a second qualified medical practitioner and such decision shall be final.

22. Every person who has been certified as fit for employment underground shall, before he is so employed, be provided by the manager with a metal token. Such token shall be stamped with the letter "P" and numbered. The number shall be the same as that of the certificate of fitness.

23. A record of every token so issued and the person to whom it was issued shall be maintained in the office of the mine.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

6. In the rules for mines other than coal mines—

(*a*) For the existing Schedule A the following shall be substituted :—

SCHEDULE A.

(*See* RULE 9.)

Register of employees.

Name and cast of the employee.	Age.	Sex.	Nature of employment.	Date of commencement of employment.	Periods of work.		Intervals for rest to which he/she is entitled		Date of rest to which he/she is entitled.	Relay* to which he/she belongs.
					Begins.	Ends.	Begins.	Ends.		
					A.M. / P.M.	A.M. / P.M.	A.M. / P.M.	A.M. / P.M.		

*In mines where work is carried on by a system of relays.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

(b) For the existing Schedule C the following Schedule shall be substituted :—

SCHEDULE C.

(*See* RULE 9-A.)

Notice of commencement and end of work.

Name of mine.....

Name of owner of mine.....

It is hereby notified that persons employed in this mine shall begin and end their periods of work between the hours set out below :—

Kind of worker.	1st relay.				2nd relay, if any.				3rd relay, if any.			
	Period of work.		Rest interval.		Period of work.		Rest interval.		Period of work.		Rest interval.	
	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.
	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.

Note.—The words and letters not wanted should be scored out.

In the case of underground workers, the entry in the rest interval column will be *nil*.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 14—*contd.*

(c) After Schedule C the following Schedule shall be inserted :—

SCHEDULE D.

(*See* RULE 17.)

Form of certificate of fitness for employment underground in a mine.

Counterfoil of certificate of fitness.	Certificate of fitness.
Serial No.....	Serial No.....
Date.....	Date.....
2. Name.....	This certificate unless renewed shall not be valid after.....*
3. Father's name.....	I hereby certify that I have personally examined (name).....
4. Sex and caste or religion.....	.....
.....	son/daughter of.....
	(caste, etc.).....
	residing at.....
5. Residence.....	who is desirous of being employed in a mine and that his/her age as nearly as can be ascertained
6. Age certified.....	from my examination is.....Years and that he/she is fit for employment underground in a
7. Distinctive marks.....	mine as an adult. His/Her descriptive marks are.....
.....	.....
Left thumb impression.	Left thumb impression.
.....	.....
Qualified Medical Practitioner.	Qualified Medical Practitioner.
	Renewed till.....
	Date.....
	Signature of Qualified Medical Practitioner.

*Date twelve months after date of issue to be filled in by the Medical Practitioner.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 15.

ACT NO. XXIX OF 1937.

[PASSED BY THE INDIAN LEGISLATURE.]

(Received the assent of the Governor General on the 3rd December, 1937.)

An Act further to amend the Indian Mines Act, 1923, for certain purposes.

IV of 1923. WHEREAS it is expedient further to amend the Indian Mines Act, 1923, for the purposes hereinafter appearing; It is hereby enacted as follows:—

1. *Short title.*—(*1*) This Act may be called the Indian Mines (Amendment) Act, 1937.

IX of 1936. 2. *Amendment of Section 2, Act XI of 1936.*—In section 2 of the Indian Mines (Amendment) Act, 1936,—

(*a*) in sub-section (*1*), for the words "the following sub-section shall be deemed to be inserted" the words "the following sub-section shall be inserted" shall be substituted, and

(*b*) sub-section (*2*) shall be omitted.

IV of 1923. 3. *Amendment of section 9, Act IV of 1923.*—In section 9 of the Indian Mines Act, 1923 (hereinafter referred to as the said Act),—

(*a*) to sub-section (1) the following words shall be added, namely:—

"and shall not be disclosed to any person other than a Magistrate or an official superior or the owner, agent or manager of the mine concerned, unless the Chief Inspector or the Inspector considers disclosure necessary to ensure the safety of any person";

(*b*) in sub-section (*2*), for the words "to any one, other than a Magistrate or an officer to whom he is subordinate" the following words shall be substituted, namely:—

"contrary to the provisons of sub-section (*1*)";

(*c*) in sub-section (*3*), for the words following the words "under this section" the following words shall be substituted, namely:—

"except with the previous sanction of the Central Government".

4. *Amendment of Section 30A, Act IV of 1923.*—In section 30-A of the said Act, for the word "regulations" the word "rules" shall be substituted, and for clauses (*a*), (*b*), (c) and (*d*) the following clauses shall be substituted namely:—

"(*a*) requiring the establishment of central rescue stations for groups of specified mines or for all mines in a specified area, and prescribing how and by whom such stations shall be established;

(*b*) providing for the management of central rescue stations and regulating the constitution powers and functions of, and the conduct of business by, the authorities (which shall include representatives of the owners and managers of, and of the miners employed in, the mines or groups of mines concerned) charged with such management;

(*c*) prescribing the position, equipment, control, maintenance and functions of central rescue stations;

(*d*) providing for the levy and collection of a duty of excise (at a rate not exceeding six pies per ton) on coke and coal produced in and despatched from mines specified under clause (*a*) in any group or included under clause (*a*) in any specified area, the utilisation of the proceeds thereof for the creation of a central rescue station fund for such group or area and the administation of such funds;

(*e*) providing for the formation, training, composition, and duties of rescue brigades; and

(*f*) providing generally for the conduct of rescue work in mines."

5. *Amendment of section 31, Act IV of 1923.*—In sub-section (*1*) of section 31 of the said Act, for the word and figure "and 30" the figures and word "30 and 30A" shall be substituted.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 16.

NOTIFICATION.

Dhanbad, the 15th December 1937.

No. P.-2.—In exercise of the powers conferred by Regulation 2(cc) and Regulation 116-A (b) of the Indian Coal Mines Regulations, as published under Notification No. M.-1077, dated the 29th August 1936, and in supersession of Notification No. P.-1, dated Dhanbad, the 29th August 1936, the undernoted list of "Permitted" Explosives is hereby published for general information:—

List of "Permitted" Explosives.

Name of Explosive.	Place of manufacture.	Permissible maximum charge.
Monobel No. 1 . .	Ardeer, Ayrshire, Great Britain, and Modderfontein, South Africa.	28 ounces.
A. 2 Monobel . . .	Ardeer, Ayrshire, Great Britain, and Deerpark, Melbourne, Australia.	28 ounces.
Polar Dynobel No. 2 . .	Ardeer, Ayrshire, Great Britain.	28 ounces.
Samsonite No. 3 . .	Ardeer, Ayrshire, Great Britain, and Deerpark, Melbourne, Australia.	28 ounces.
Stonobel . . .	Ardeer, Ayrshire, Great Britain, and Deerpark, Melbourne, Australia.	28 ounces.
Roburite No. 4 . . .	Gathurst, Wigan, Great Britain.	28 ounces.
A. 1 Rounkol	Ardeer, Ayrshire, Great Britain.	18 ounces.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 16—*contd.*

Provided (*a*) that each cartridge of explosive shall be marked with the outline of a crown with the letter " P " in the centre and (*b*) that the explosive when used in any mine or place in which " permitted " explosives are required to be used by any Regulation or order under the Indian Mines Act, shall be fired by one of the following types of approved shot-firing apparatus :—

List of shot-firing apparatus.

Manufactured by.	Name of apparatus.
Magneto Exploders.	
British Insulated Cables,Limited, Prescot, Lancashire .	Helsby (1932) L. T.
Ditto .	Helsby (1933) L. T.
John Davis & Son (Derby) Limited, All Saints' Works, Derby.	Davis No. 15 X (1932) L. T.
General Electric Co., Ltd., Magnet House, Kingsway, London, W. C. 2.	Magnet (1932) L. T.
Battery Exploders.	
John Davis & Son (Derby) Limited, All Saints' Works, Derby.	Davis (1932) L. T.
General Electric Co., Ltd., Magnet House, Kingsway, London, W. C. 2.	G. E. C. (1933) L. T.
Heyes & Co., Ltd., Wigan	Wigan No. 4 L. T.

Statement No. 17.

Circular No. 1.

Dhanbad, the 6th January 1937.

From

D. Penman, Esq., D. Sc., F.R.S.E.,
Chief Inspector of Mines in India.

To

The Owners, Agent or Manager.

Sir,

I have the honour to invite reference to my Circular No. 10 of 1936, dated 28th November 1936, wherein I pointed out the necessity of using certified and totally enclosed flameproof apparatus in safety lamp mines in situations which are not main intake airways and also near depillaring areas.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 17—*contd.*

As there remains a serious risk of a sudden emission of firedamp in dangerous quantities from goaves in depillaring areas, it is essential for safety that all electrical apparatus which may be situated even in main intake airways within a distance of 700 feet from the nearest depillaring areas or the nearest goaf edges should also be of the certified and totally enclosed flame proof types, unless the goaves are effectively packed.

All signalling instruments connected to bare signalling wires which may extend to above situations should be of the types approved by the British Mines Department and tested for intrinsic safety.

I shall be glad if you would kindly arrange to give effect to the above matters as early as possible.

I have the honour to be,

Sir,

Your most obedient servant,

D. PENMAN,
Chief Inspector of Mines in India.

Statement No. 18.

Circular No. 2 of 1937.

Dhanbad, the 12th January 1937.

To

The Owner, Agents or Manager.

Apparatus required for sampling and analysing coal-dust samples.

1. Five or six dozen small tins about 4″ tall and 2½″ diameter, with wellfitting lids (empty health-salt tins are quite suitable). The tins must be dried thoroughly in the water-oven, if necessary, before use.

2. One small hand-brush.

3. One tray about 15″ square, with one edge flat, as in the case of an ordinary dust-pan.

4. One case about 16″ by 22″ by 5″ in which to carry the samples.

It is desirable that the case should be divided into compartments by cardboard partitions as in an egg-box. About three dozen samples can then be taken on one round.

5. One chemical balance in case to weigh 100 grams to one-tenth of a milligram with a box of weights for same.

6. Two desiccators (Schieblers) 6 inches to 8 inches in diameter.

7. Two pounds of concentrated sulphuric acid (for desiccators and the balance case).

8. Two lamp gauzes for use as sieves.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 18—*contd.*

9. One sieve of 200 meshes to the lineal inch, with case and top, 5 inches diameter, for sieving test on the stone-dust.

10. One pair of crucible tongs 8 inches long of iron or copper.

11. Four dozen crucibles, best porcelain with lids (1 inch high, 1½ inches diameter).

12. Six watch glasses (3 inches diameter.)

Also the following according as heating by gas or electricity is to be resorted to :—

13. If heating by gas :—

(*a*) One ordinary water oven, 10 inches by 10 inches by 10 inches.
(*b*) One dozen bunsen burners, 6 inches by $\frac{7}{16}$-inch diameter.
(*c*) Four gas taps.
(*d*) One dozen T. pieces ⅜-inch diameter.
(*e*) One dozen screw clips, ¾-inch with hinge.
(*f*) Ten yards best rubber tubing for gas piping, ⅜-inch diameter.
(*g*) One dozen pipe clay triangles—medium size.
(*h*) Six tripods.

14. If heating by electricity :—

(*a*) One electrically heated water-oven (with fittings) inside dimensions 10 inches by 10 inches by 10 inches.
(*b*) One electrically heated furnace (with fittings) capable of attaining a temperature of 1,000°C.—inside dimensions 12 inches by 5 inches by 3½-inches.

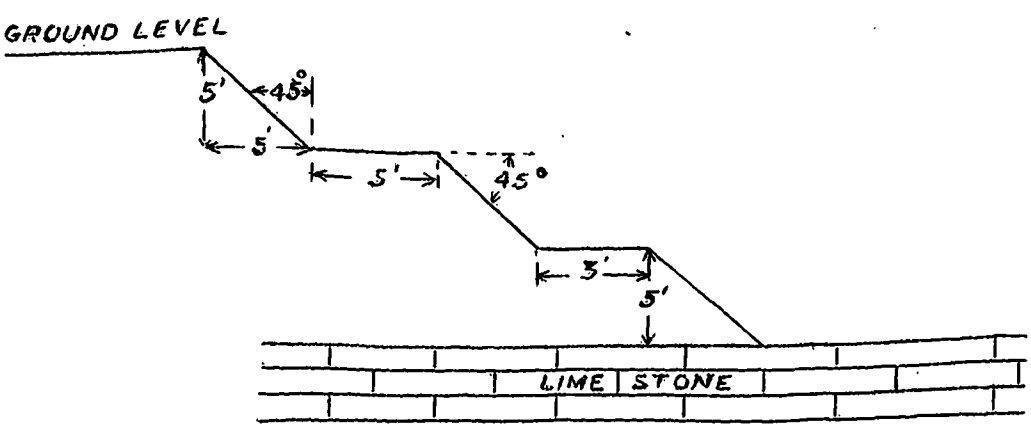
D. PENMAN,
Chief Inspector of Mines in India.

Statement No. 19.

Instructions regarding removal of overburden, sloping and steping of sides of Limestone quaries.

1. All overburden shall be removed down to the top bed of limestone and clear of the edge of the limestone for a distance of not less than 10 feet, and constantly maintained at that distance or a greater distance.

2. Where the thickness of the overburden exceeds 5 feets the sides shall be stepped as in the sketch below :



APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 19—*contd.*

Provided that the steps may be made at intervals of less than 5 feet in the same proportion as is shown in the sketch:

Provided also that foot-paths for the use of work-persons may be made where necessary so long as the sides of such foot-paths are sloped and stepped in the manner specified.

3. No loose pieces of stone should be left lying within 5 feet of the edge of the quarry at the ground level or on any of the steps or benches.

4. Where the limestone is removed in benches no such bench shall exceed 5 feet in height above the level of the quarry in the vicinity of the bench.

5. Where owing to the specially soft nature of the ground precautions exceeding those stated are necessary, they shall be taken by the manager.

D. PENMAN,
Chief Inspector of Mines in India.

Circular No. 3.

Dhanbad, the 17th March 1937.

Copy forwarded to the.....

.....

for information, with the request that the above instructions should be carried out.

Chief Inspector of Mines in India.

Statement No. 20.

Circular No. 4.

Dhanbad, the 21st April 1937.

The attention of owners, Agents and Managers of all mica and copper mines is invited to the register required under Section 28(1) and Rule 9. It is important that a correct record should be maintained at any moment of the names of every person working below-ground in a mine. Such records should be maintained in the sample form of register as appended until such time as an amended form of register is prescribed.

D. PENMAN,
Chief Inspector of Mines in India.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 20—*contd.*

Register of work persons employed underground.

Name of mine_____

Names of owners_____

Name and caste.	Age and sex.	Father's name, or in the case of a married woman or widow, husband's name.	Nature of work.	Sunday.		Monday.		Tuesday.		Wednesday.		Thursday.		Friday.		Saturday.		Number of hours worked during the week ending ——19 .
				In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Total number of persons employed underground																		

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 21.

Circular No. 5.

Dhanbad, the 1st June 1937.

To

The Owner, Agent or Manager.

.....

.....

Sir,
Gentlemen,

The Civil Surgeon, Singhbhum has drawn my attention to an outbreak of Cholera in the District of Singhbhum—especially in the Dhalbhum Sub-Division. He fears that it may spread rapidly un less preventive steps are taken.

In these circumstances I shall be pleased if you will kindly take all such precautionary measures in consultation and in co-operation with the medical Department of the district as may be necessary.

I have the honour to be,

Sir,

Your most obedient servant,

W. KIRBY,

Chief Inspector of Mines in India (Offg.).

Statement No. 22.

Circular No. 6.

Dhanbad, the 29th June 1937.

The attention of Owners, Agents and Managers of all coal mines is drawn to Notifications No. M-1055, dated the 1st February 1937, and No. M-1055, dated the 17th June 1937, issued by the Government of India, Department of Industries and Labour, regarding the regulations for prohibiting the employment of women underground in mines.

It should be noted that the effect of the latter Notification is to suspend only Regulation 1 of the regulations laid down in Notification, dated the 1st February 1937. Regulations 3 and 4 of that notification remain in force unaltered. They read as follows :—

" *Regulation 3.*—No woman shall be permitted to enter or remain in the underground workings of any mine unless she is in possession of a pass granted by the manager of the mine.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 22—*contd.*

Regulation 4.—Before a woman enters a mine with a pass granted under Regulation 3, her name, address and occupation shall be entered in a register maintained for this purpose at the surface of the mine, and her exit from the mine shall also be recorded in that register.

Provided that in any mine to which sub-section (4) of Section 28 of the Indian Mines Act, 1923 (IV of 1923), has been declared to be applicable, the entries required by this regulation may be made in the register prescribed by that sub-section ".

W. KIRBY.
Chief Inspector of Mines in India (Offg.)

Statement No. 23.

Circular No. 7.

Dhanbad, the 12th July 1937.

The attention of Owners, Agents and Managers of all coal mines is drawn to the recommendation made by the Coal Mining Committee in paragraph 311 of their Report that all short-firers should be paid a regular wage and should not be allowed to have any financial interest in coal-getting.

It is requested that all will co-operate in giving effect to the recommendation as a safety measure.

W. KIRBY,
Chief Inspector of Mines in India (Offg.)

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